H.264, Easy Connect, Internet Remote Viewing

DIGITAL VIDEO SURVEILLANCE RECORDER

INSTRUCTION MANUAL

English Version 1.0

MODEL:
LH600 SERIES

LOREX®

www.lorextechnology.com

Copyright © 2010 Lorex Technology Inc.

Thank you for purchasing this product. Lorex is committed to providing our customers with a high quality, reliable security solution.

This manual refers to the following model(s):

- LH604501

For more information on this product, firmware updates, and accessory products, please visit us at:

www.lorextechnology.com

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER. NO USER SERVICABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the products ' enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF THE PLUG TO THE WIDE SLOT AND FULLY INSERT.

NEED HELP?

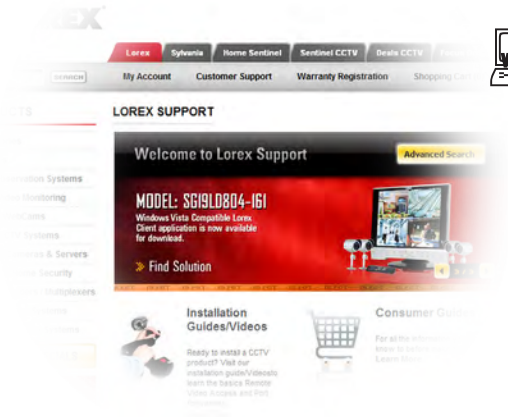
LOREX

CONTACT US FIRST

DO NOT RETURN THIS PRODUCT TO THE STORE

Please make sure to register your product at www.lorextechnology.com to receive product updates and information

3 EASY WAYS TO CONTACT US:



Online:

Product Support is available 24/7 including product information, user manuals, quick start up guides and FAQ's at **www.lorextechnology.com/support**

To order accessories, visit **www.lorextechnology.com**

By Email:

Technical Support (for technical/installation issues)
support@lorexcorp.com

Customer Care (for warranty and accessory sales)
customerservice@lorexcorp.com

Customer Feedback
info@lorexcorp.com

By Phone:

NORTH AMERICA:
CUSTOMER SERVICE: 1-888-425-6739 (1-888-42-LOREX)
TECH SUPPORT: 1-877-755-6739 (1-877-75-LOREX)
MEXICO: 1-866-427-6739
INTERNATIONAL: +800-425-6739-0
(Example: From the UK, dial 00 instead of +)

LOREX

NECESITA AYUDA

COMUNÍQUESE PRIMERO CON NOSOTROS

VOUS AVEZ BESOIN D'AIDE?

CONTACTEZ-NOUS D'ABORD

NO DEVUELVA ESTE PRODUCTO A LA TIENDA

Cerciórese de por favor colocar su producto en www.lorexcctv.com/registration para recibir actualizaciones y la información del producto

3 MANERAS SENCILLAS DE COMUNICARSE CON NOSOTROS:

En línea:

apoyo al producto disponible 24/7 incluyendo información del producto, manuales para el usuario, guías de inicio rápido y preguntas más frecuentes en

www.lorextechnology.com/support

Para colocar pedidos de accesorios, visite

www.lorextechnology.com

Por Correo Electrónico:

soporte técnico (para asuntos técnicos/la instalación)

support@lorexcorp.com

O

servicio al cliente (respecto a la garantía y a la venta de accesorios)

customerservice@lorexcorp.com

Comentarios de cliente

info@lorexcorp.com

Por Teléfono:

L'AMÉRIQUE DU NORD:

ATENCIÓN AL CLIENTE: 1-888-425-6739 (1-888-42-LOREX)

SOPORTE TÉCNICO: 1-877-755-6739 (1-877-75-LOREX)

MEXICO: 1-866-427-6739

INTERNACIONAL: +800-425-6739-0

(Ejemplo: Desde el Reino Unido, marque el 00 en lugar del +)

sus opiniones son bienvenidas en info@lorexcorp.com

para colocar pedidos de accesorios, visite

www.lorextechnology.com

NE RETOURNEZ PAS CE PRODUIT AU MAGASIN

Veuillez veiller à enregistrer votre produit à www.lorexcctv.com/registration pour recevoir des mises à jour et l'information de produit

3 FAÇONS FACILES DE NOUS CONTACTER:

En ligne:

le support des produits est disponible 24 heures sur 24, 7 jours sur 7, y compris les informations sur les produits, les guides de l'utilisateur, les guides de démarrage rapide et les foires à questions

www.lorextechnology.com/support

Pour commander des accessoires, visitez

www.lorextechnology.com

Par Courriel:

support technique (pour les questions techniques et d'installation) **support@lorexcorp.com**

OU

service à la clientèle (pour les questions de garantie et les ventes d'accessoires)

customerservice@lorexcorp.com

Commentaires des clients

info@lorexcorp.com

Par Téléphone:

NORTE AMÉRICA:

SERVICE À LA CLIENTÈLE: 1-888-425-6739 (1-888-42-LOREX)

SUPPORT TECHNIQUE: 1-877-755-6739 (1-877-75-LOREX)

MEXICO: 1-866-427-6739

INTERNATIONAL: +800-425-6739-0

(Exemple: À partir du Royaume-Uni, composez 00 au lieu de +)

nous serions heureux de recevoir vos commentaires à info@lorexcorp.com pour commander des accessoires, visitez

www.lorextechnology.com

BEFORE YOU START

THIS PRODUCT MAY REQUIRE PROFESSIONAL INSTALLATION

LOREX IS COMMITTED TO FULFILLING YOUR SECURITY NEEDS

- We have developed user friendly products and documentation. Please read the Quick Start Guide and User Manual before you install this product.

- Consumer Guides and Video Tutorials are available on our web site at **www.lorextechnology.com/support**

- If you require further installation assistance, please visit **www.lorextechnology.com/installation** or contact a professional installer.

- Please refer to the “Need Help” insert for technical support and customer care information.

- Please note that once the components of this product have been unsealed, you cannot return this product directly to the store without the original packaging.

LOREX®
www.lorexcctv.com

AVANT DE COMMENCER

CE PRODUIT POURRAIT EXIGER UNE INSTALLATION PROFESSIONNELLE

LOREX S'ENGAGE À SATISFAIRE VOS BESOINS SÉCURITAIRES

• Veuillez lire le guide de démarrage rapide et le mode d'emploi avant d'installer ce produit.

• Les guides du consommateur et les séances de tutorat vidéo sont disponibles sur l'Internet en visitant **www.lorextechnology.com/support**

• Si vous avez besoin de l'aide pour l'installation, veuillez visiter **www.lorextechnology.com/installation** ou contactez un spécialiste en installation

• Veuillez référer à l'insert "Need Help" pour ob¬tenir de l'information sur le service à la cli-entèle et le support technique

• Veuillez constater qu'une fois que les com¬posantes de ce produit ont été retirées de l'emballage, vous ne pourrez plus retourner ce produit directement au magasin.

ANTES DE EMPEZAR

ESTE PRODUCTO PUEDE EXIGIR UNA INSTALACIÓN PROFESIONAL

LOREX SE COMPROMETE A SATISFACER SUS NECESIDADES EN SEGURIDAD

• Favor de leer la guía de instalación rápida y la guía del usuario antes de instalar este producto.

• Puede conseguir las guías del consumidor y los cursos en enseñanza video sobre el Internet visitando **www.lorexcctv.com/support**

• Si necesita ayuda para la instalación, visite **www.lorextechnology.com/installation** o contacte un especialista en instalaciones

• Favor de referir al documento "Need Help" para obtener información acerca del servicio al cliente y al soporte técnico

• Favor de notar que una vez que los compo-nentes de este producto han sido removidos del embalaje, no podrá devolver este producto di-rectamente a la tienda

LOREX®

www.lorextechnology.com

April 27 2010 R3

TABLE OF CONTENTS

Getting Started 1
Basic Setup 2
1. Connect The BNC Cameras 2
2. Connect The Mouse 2
3. Connect The Ethernet Cable 2
4. Connect a DVI Display 3
5. Connect The Power Adapter 3
6. Verify Camera Image 3
7. Set The Time 3
Connecting The Cameras 4
Camera Stand Installation 4
Connecting and Removing BNC cables 5
Front Panel 6
Rear Panel 7
Control Devices 8
Remote Control 8
System Navigation 9
Mouse Control 9
Remote Control Navigation 9
Quickly Access System Information 9
Using the System 10
Powering on/off The System 10
Logging In To The System 11
Logging Out Of The System 12
Using the Virtual Keyboard 12
On-Screen Display 13
Changing Display Modes 14
Using Auto Sequence 14
Quick Menu 15
Understanding the Quick Menu 15
Searching For Video 16
Searching For Video By Time 16
Searching For Video By Event 18
Video Playback Controls 19
Archiving VIdeo 20
Viewing Archived Video 21
Backup Player Playback Controls 23
Panic Recording 23
Searching for Panic Recording Video 24

Setting the Time 25
Automatic Time Synchronization 25
Daylight Savings Time 25
Recording 26
Continuous Recording 26
Motion Recording 26
Alarm Recording 27
Panic Recording 27
Recording Audio 27
Configuring Recording Settings 28
Adjusting Pre & Post Event Recording Time 28
Configuring Recording Modes (Simple Recording) 29
Enable Simple Recording Mode 29
Configure Recording Quality, Screen Resolution and Frame Rate 30
Configure Recording Schedule 30
Scheduling Tips 31
Configuring Recording Modes (Advanced Recording) 31
Enable Advanced Recording 31
Customize Recording Quality 32
Customizing Recording Type (Daily mode) 34
Customizing Recording Type (Weekly mode) 35
Configuring Panic Recording 36
Configuring System Setup 37
System Setup Overview 37
DISPLAY 38
OSD Tab 38
Changing OSD (On Screen Display) options: 38
Monitor Tab 38
Changing Motion , Alarm Pop-up, Spot and Sequence settings: 38
Camera 40
Camera Title Tab 40
Changing the Camera Title 40
Enabling Covert Mode 40
Color Setup Tab 40
Adjusting Camera Brightness and Color 40
PTZ Setup Tab 41
PTZ Setup 41
Motion Sensor Tab 42
Configuring Motion Sensor Sensitivity 42
Camera Mode Tab 42
Sound 43
Audio Tab 43
Enabling System Network Audio 43
Buzzer Tab 43
Disabling System 'Beeps' 43
System 44
Date/Time Tab 44
Configuring system Date and Time 44

Configuring system Date format and 24 HR vs 12HR time notation 44
Configuring Time Server 44
Enabling/Disabling Daylight Savings Time 44
Adjusting System Time Zone 44
Network Tab 45
Enabling DDNS & DHCP 45
Configuring DDNS Settings 45
Auto Port Forwarding 46
Configuring System Transmission speed 46
Mail Tab 46
Configuring the E-mail Server 46
Configuring Your System To Send Notification E-Mails 47
User Management Tab 47
Configuring Email Notification Settings 48
Configuring Password Expiry Duration 48
Adding New Users 48
System Management Tab 49
Viewing System Information 49
Changing The System Name 49
Upgrading The System Firmware 49
Restoring System Defaults 50
Saving and Loading System Settings 51
Enabling and Disabling The System Password 51
Control Device Tab 52
Event/Sensor 53
HDD Event 53
Alarm Input 53
Alarm Output 54
Behavior Settings 54
Action Settings 54
Buzzer Out 55
Behavior Settings 55
Action Settings 55
E-mail Notification 55
Behavior Settings 56
Action Settings 56
Disk Manage 56
Formatting the HDD 57
Using Web Remote Viewer 59
Connecting to Web Remote Viewer Locally 59
Connecting to Web Remote Viewer using DDNS 59
Web Remote Viewer 60
System Requirements 60
Logging into Web Remote Viewer 61
The System Tabs 63
Using The Navigation Bar 64
The Live Tab 65
Viewing Video In Different Modes 65
Viewing Channels In A Sequence 65
..... 65

Enabling Audio During Viewing 66
Syncing Video Audio 66
Muting Audio 66
Switching Channels 66
Choosing a Save Directory 66
Saving Video Clips 67
Printing An Image Of A Channel 67
Changing Hardware Video Acceleration Type 67
Monitoring Your Cameras 68
Increasing and Reducing Video Refresh Rates 68
Viewing An Event Log 69
Configuring PTZ Settings 69
The Search Tab 70
Searching For A Video By Time 70
Searching For A Video By Event 71
Backing Up A Video 72
The Setup Tab 73
Configuring Camera Settings 74
Setting Camera Name, Covert Settings and Camera Audio Input 74
Adjusting Camera Color 74
Adjusting PTZ Settings 75
Configuring Camera Motion Detection Settings 76
Configuring Display Settings 77
Adjusting Video Monitoring Settings 78
Adjusting Audio Settings 79
Configuring System Settings 80
Configuring Date and Time 80
Configuring Network Settings 80

Adjusting DVR Bandwidth Speed 80
Configuring An E-mail Server For The DVR 81
Configuring User Settings 82
Adding Users To The DVR 82
Viewing System Information 83
Changing Your DVR's Name 83
Enabling / Disabling the DVR's Password 84
Changing PTZ Keyboard Settings 84
Configuring DDNS Settings. 85
Enabling DDNS 85
Configuring Recording Settings 86
Adjusting Pre and Post Alarm Duration 86
Selecting Recording Mode: Simple vs Advanced 86
Configuring "Simple" Recording Mode 87
Adjusting Advanced Recording Settings 88
Configuring Panic Recording Settings 89
Configuring HDD Event Settings 91
Configuring Alarm Input Settings 91
Configuring Alarm Output Settings 92
Configuring Buzzer Out Settings 93
Configure E-mail Notification 94
Setting Up Remote Viewing 95
Advanced Monitoring using DDNS 95

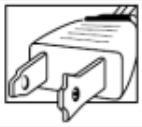
Advanced Remote Monitoring Using DDNS 96
What Do I Need? 96
How Do I Find My IP and MAC addresses? 97
What is Port Forwarding? 98
Lorex Auto Port Forwarding Wizard 99
Installation 99
Obtaining Your Router Model Number and Version 100
Example 100
Configuration 101
Initial Startup: Select language 101
Step 1: Populate the router database 101
Step 2: Enter your router settings 102
Step 3: Update the router settings 103
Step 4: Test your connection 103
Configuring multiple routers 103
Scenario A: Router/Modem combination + Router 104
Scearnio B: Multiple Routers 104
Example 105
Setting Up DDNS Service 106
How Do I Enable DDNS On My System? 107
Enabling DDNS & DHCP 107
Networking Checklist 108
Remote Viewing On Mobile Devices 110
Before You Begin 110
Viewing Your DVR From Your iPhone 110
Web Remote Viewer iPhone Interface 111
Viewing Your DVR From Your 3G Blackberry 112
Appendix A: System Specifications 114
Appendix B: Replacing The Hard Drive 118
Appendix C: Using The Storage Calculator 122
Appendix D: Enabling E-Mail Notifications 123
Appendix E: Full Connectivity Diagram 127
Appendix F: Connecting PTZ Cameras 128
Appendix G: Connecting Additional External Monitors 130
Appendix H: Connecting Motion / Alarm Devices 131
Appendix I: Connecting Audio Devices 132
Troubleshooting 133

Important Safeguards

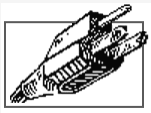
In addition to the careful attention devoted to quality standards in the manufacturing process of your video product, safety is a major factor in the design of every instrument. However, safety is your responsibility too. This sheet lists important information that will help to assure your enjoyment and proper use of the video product and accessory equipment. Please read them carefully before operating and using your video product.

Installation

1. **Read and Follow Instructions** - All the safety and operating instructions should be read before the video product is operated. Follow all operating instructions.
2. **Retain Instructions** - The safety and operating instructions should be retained for future reference.
3. **Heed Warning**s - Comply with all warnings on the video product and in the operating instructions.
4. **Polarization** - Do not defeat the safety purpose of the polarized or grounding-type plug.

   A polarized plug has two blades with one wider than the other.

   A grounding type plug has two blades and a third grounding prong.

   The wide blade or the third prong are provided for your safety.

   If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
5. **Power Sources** - This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your location, consult your video dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.
6. **Overloading** - Do not overload wall outlets of extension cords as this can result in the risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicates damage or deteriorated insulation, have it replaced by your service technician.
7. **Power Cord Protection** - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the video product.
8. **Ventilation** - Slots and openings in the case are provided for ventilation to ensure reliable operation of the video product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video equipment on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the video product manufacturer's instructions have been followed.
9. **Attachments** - Do not use attachments unless recommended by the video product manufacturer as they may cause a hazard.
10. **Camera Extension Cables** – Check the rating of your extension cable(s) to verify compliance with your local authority regulations prior to installation.
11. **Water and Moisture** - Do not use this video product near water. For example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, near a swimming pool and the like.

    Caution: Maintain electrical safety. Powerline operated equipment or accessories connected to this unit should bear the UL listing mark of CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.
12. **Accessories** - Do not place this video equipment on an unstable cart, stand, tripod, or table. The video equipment may fall, causing serious damage to the video product. Use this video product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the video product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer.

Service

13. **Servicing** - Do not attempt to service this video equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
14. **Conditions Requiring Service** - Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    - When the power supply cord or plug is damaged.
    - If liquid has been spilled or objects have fallen into the video product.
    - If the video product has been exposed to rain or water.
    - If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
    - If the video product has been dropped or the cabinet has been damaged.
    - When the video product exhibits a distinct change in performance. This indicates a need for service.
15. **Replacement Parts** - When replacement parts are required, have the service technician verify that the replacements used have the same safety characteristics as the original parts. Use of replacements specified by the video product manufacturer can prevent fire, electric shock or other hazards.
16. **Safety Check** - Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the video product is in safe operating condition.
17. **Wall or Ceiling Mounting** - The cameras provided with this system should be mounted to a wall or ceiling only as instructed in this guide, using the provided mounting brackets.
18. **Heat** - The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Use

19. **Cleaning** - Unplug the video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
20. **Product and Cart Combination** - Video and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the video product and car combination to overturn.
21. **Object and Liquid Entry** - Never push objects for any kind into this video product through openings as they may touch dangerous voltage points or "short-out" parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.
22. **Lightning** - For added protection for this video product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power line surges.

General Precautions

1. All warnings and instructions in this manual should be followed.
2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use a water dampened cloth for cleaning.
3. Do not use this unit in humid or wet places.
4. Keep enough space around the unit for ventilation. Slots and openings in the storage cabinet should not be blocked.
5. During lightning storms, or when the unit is not used for a long time, disconnect the power supply, antenna, and cables to protect the unit from electrical surge.

FCC CLASS B NOTICE

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instruction, may cause harmful interference to radio communications.However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment on and off), the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for assistance

This equipment has been certified and found to comply with the limits regulated by FCC, EMC, and LVD. Therefore, it is designated to provide reasonable protection against interference and will not cause interference with other appliance usage.

However, it is imperative that the user follows the guidelines in this manual to avoid improper usage which may result in damage to the unit, electrical shock and fire hazard injury.

In order to improve the feature functions and quality of this product, the specifications are subject to change without notice from time to time.

LOREX®

www.lorextechnology.com

Features

Digital Video Recorder Features

- H.264 compression supports D1 (704x480) resolution video recording (1)
- Pentaplex operation - View, Record, Playback, Back up & Remotely control the system simultaneously
- DVI (with VGA converter) & BNC outputs for display on PC or TV monitor
- 24/7 100% duty cycle hard drive pre-installed, expandable up to 2TB
- Back-up critical images to USB media: flash drive, external HDD
- GUI with mouse navigation for easy set-up and programming

Connectivity

- LOREX Instant Mobile Viewing on iPhone™, Blackberry™, Windows® Mobile and other compatible 3G smart phones†
- Exclusive LOREX Easy Connect Internet Set-up Wizard (2)
- PC (Microsoft Windows™ 7/Vista/XP compatible) using Internet Explorer® browser
- Apple Mac compatible (3) using the Safari browser for selectable single channel live viewing
- Free LOREX DDNS (Dynamic Domain Name Service) for advanced remote connectivity at all times
- Instant email alerts

1. Recording time may vary based on recording resolution & quality, lighting conditions and movement in the scene. Storage calculator included on your CD.
2. Requires a high speed internet connection and UPNP (Universal Plug & Play) router - not included.
3. Apple MAC compatible using Safari Web browser for selectable single channel live viewing.
4. Always use discretion when installing video and/or audio surveillance equipment especially when there is perceived privacy. Inquire regarding federal, state and/or local regulations applicable to the lawful installation of video and or audio recording or surveillance. Party consent may be required.

†Instant Mobile Viewing on Blackberry™, iPhone™ or Windows Mobile™ 6.0 and above: selectable one channel live viewing. Mobile phone data plan is required (not included). Router port-forwarding required. For the latest smart phone compatibility list check www.lorextechnology.com Microsoft Windows™ 7, XP™, Vista™ are trademarks of Microsoft Corporation. iPhone is a trademark of Apple Inc. Blackberry is a trade mark of Research In Motion Ltd. Other trademarks are the property of Lorex Technology Inc. We reserve the right to change models, configurations or specifications without notice or liability. Product may not be exactly as shown. Images are simulated.

GETTING STARTED

The system comes with the following components:

DIGITAL VIDEO RECORDER

REMOTE CONTROL

MOUSE

ETHERNET CABLE

POWER CABLE AND POWER ADAPTER

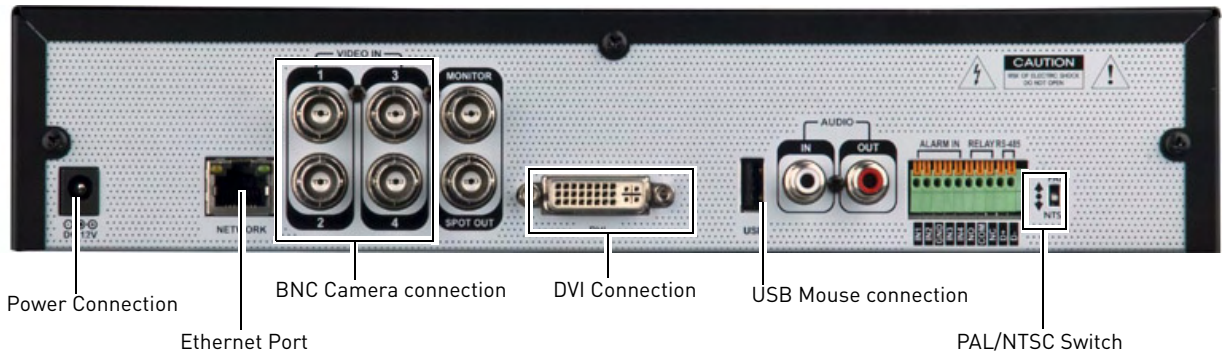
DVI TO VGA ADAPTER

QUICK START GUIDE, MANUAL, (ELECTRONIC MANUAL CD)

HARD DRIVE SIZE, NUMBER OF CHANNELS, AND CAMERA CONFIGURATION MAY VARY BY MODEL. PLEASE REFER TO YOUR PACKAGE FOR SPECIFIC CONTENT DETAILS.

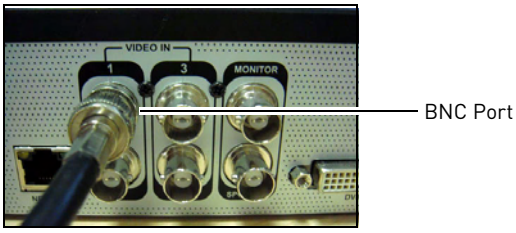
CHECK YOUR PACKAGE TO CONFIRM THAT YOU HAVE RECEIVED THE COMPLETE SYSTEM, INCLUDING ALL COMPONENTS SHOWN ABOVE.

BASIC SETUP



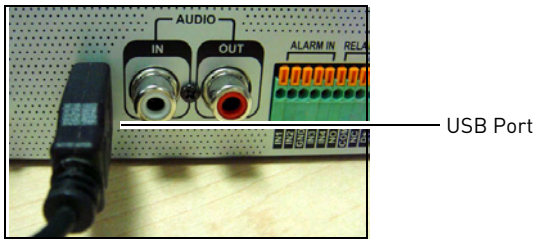
1. CONNECT THE BNC CAMERAS

- Connect the BNC cameras to the BNC ports on the rear panel of the system.



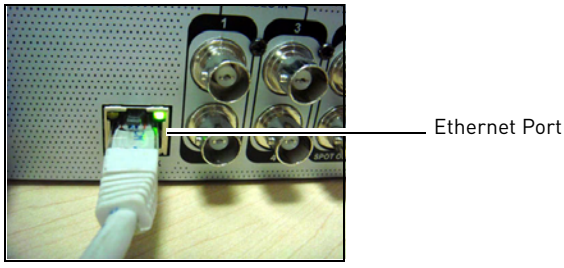
2. CONNECT THE MOUSE

- Connect a USB mouse to the USB port on the rear panel of the system.



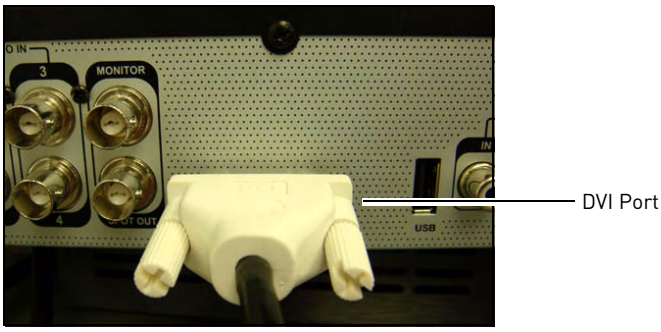
3. CONNECT THE ETHERNET CABLE

- Connect the ethernet cable to the ethernet port on the rear panel of the system.



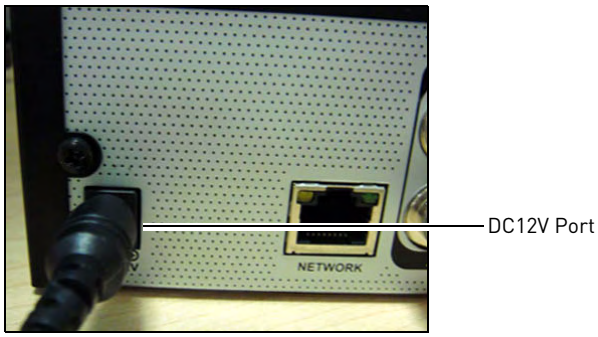
4. CONNECT A DVI DISPLAY

- Connect a DVI display to the DVI port. Use a DVI to VGA converter for VGA displays.



5. CONNECT THE POWER ADAPTER

- Connect the power adapter to the system. Connect the end of the power adapter to a wall socket or a surge protector.



6. VERIFY CAMERA IMAGE

- Verify camera video quality before mounting the cameras to a permanent location.
- If your region uses PAL output, use the **PAL/NTSC** switch on the rear panel of the system to change your region's display mode.

7. SET THE TIME

- Set the system time for accurate video time stamps. Videos with inacurate times may not be valid as surveillance evidence.
- For details on setting the time, see "Setting the Time" on page 25.

The Default System Password is: **1234**

CONNECTING THE CAMERAS

Before you mount the cameras, test to ensure the cameras have no problems. Plan where you will route the wiring for the camera, and where you will aim the camera.

Installation Tips

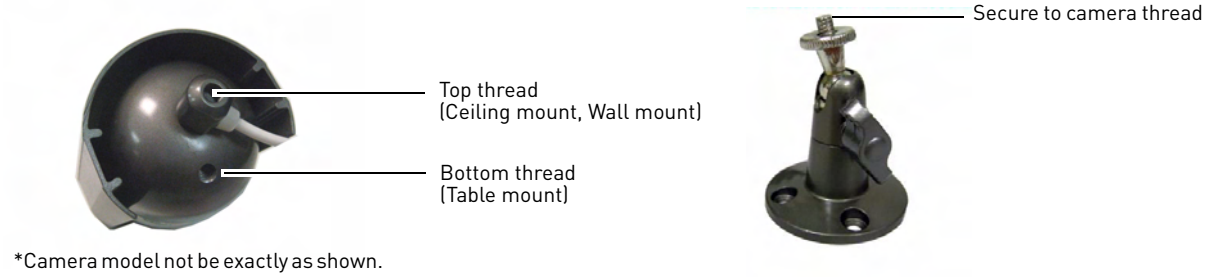
1. Mount the camera where the lenses are away from direct and intense sunlight.
2. Plan your cable wiring so that it does not interfere with power lines or telephone lines.
3. Ensure that the camera wiring is not exposed, or easily cut.
4. Adjust the camera angle so that it covers an area with high traffic.
5. In "high-risk" locations, have multiple cameras point in the same area. This provides camera redundancy if a camera malfunctions, or if a vandal attempts to damage the camera.
6. Mount the camera in an area that is visible, but out of reach.

CAMERA STAND INSTALLATION

1. Mount the camera stand to the desired mounting surface. Choose a firm mounting surface.

   NOTE: If you wish to mount the camera stand to drywall, it is recommended to use drywall plugs (not included).

2. Attach the camera to the stand.



*Camera model not be exactly as shown.

Figure 1.0 Camera stand installation.

NOTE: There are two connection points for certain cameras. Secure the stand to the top thread for wall-mounts or ceiling mounts. Secure the stand to the bottom thread for table-mounts or wall mounts.

Table Mount **Wall Mount** **Ceiling Mount**

Figure 1.1 Camera mounting options. Camera model not be exactly as shown.

Connecting BNC Cameras

To install BNC cameras to your system:

1. Connect the male power connector on the BNC extension cable to the female power connector on the camera.
   - Connect the BNC connector to the camera.
2. Connect the female power connector on the BNC extension cable to the power adapter.
   - Connect the BNC connector to the BNC port on the system.
3. Plug the power adapter to a power outlet.

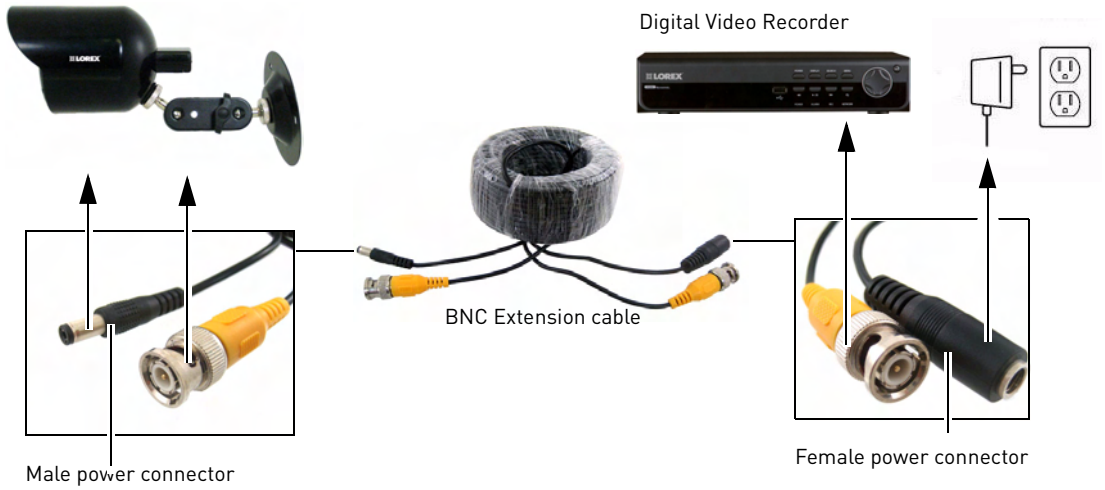


Figure 1.2 BNC camera connectivity diagram.

Connecting and Removing BNC cables

BNC (Bayonet Nut Connector) is a special connector that locks on to the system port, and cannot be accidently removed.

To connect or remove a BNC connector:

- Push the BNC connector firmly into the BNC port and simultaneously twist the connector clockwise to tighten.
- To remove a BNC connector from a BNC port, push and simultaneously twist the connector counter-clockwise to loosen the BNC connector.

FRONT PANEL

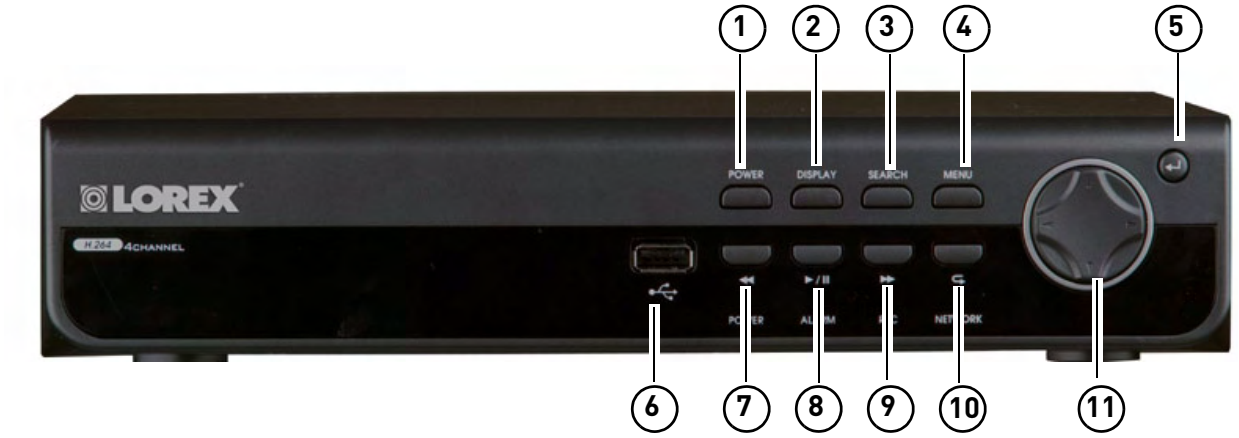


Figure 1.3 Front system panel.

1. **Power**: Shuts down the system.
2. **Display**: Switches viewing mode between single-channel, quad mode, and sequence mode.
3. **Search**: Opens the video search menu.
4. **Menu**: Opens the quick menu.
5. **Enter**: Confirms selections in the menu.
6. **USB Port**: Reads USB memory keys for firmware upgrades.
7. **REWIND**: During video playback, press rewind to view video in reverse playback (-1x,- 2x, -4x, -8x, -16x, -32x and -64x).
8. **PLAY/PAUSE**: During video playback, press pause/play to stop or resume video playback.
9. **FAST FORWARD**: During video playback, press fast forward to view video in forward playback (1x, 2x, 4x, 8x, 16x, 32x and 64x).
10. **RETURN (** **)**: Exits the screen selection.
11. **Direction Pad**: Use the direction pad to navigate the system menus.

REAR PANEL

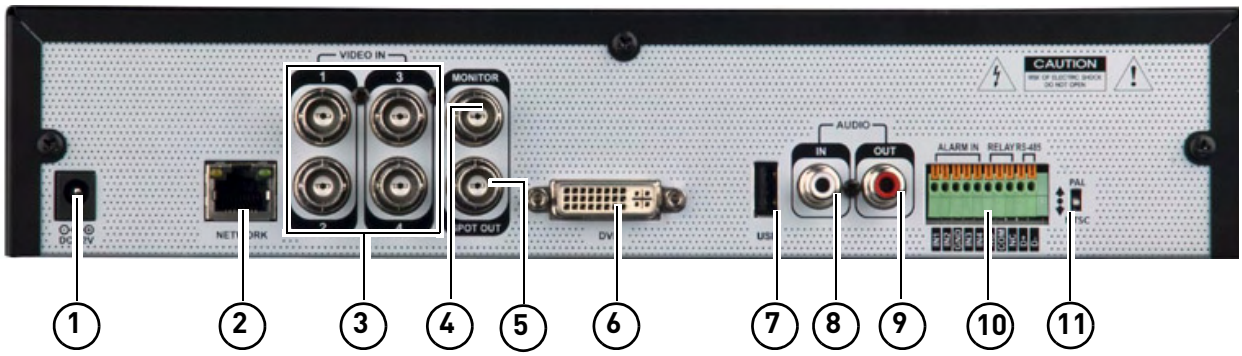


Figure 1.4 Rear system panel (4-channel model shown).

1. **DC 12V**: Port for 12V power cable (included).
2. **ETHERNET PORT**: Connect an Ethernet cable to connect the system to a router or switch (not included).
3. **VIDEO IN** : Camera input ports for BNC cameras; (4-channel configuration shown).
4. **MONITOR**: BNC output (top) to connect the system to a secondary monitor or DVR.
5. **SPOT OUT**: Spot Monitor output (bottom). Spot monitor only displays a single channel of a camera and does not display system menus.
6. **DVI**: DVI output to connect the system to a DVI monitor (not included). Use a DVI to VGA adapter (not included) to connect a VGA monitor to the system.
7. **USB** port: Connect a USB mouse to navigate the system.
8. **AUDIO IN**: Connect one audio input device (i.e. amplafied microphone, not included).
9. **AUDIO OUT**: Connect a single audio output (i.e. speakers, not included).
10. **ALARM Block**: Connect external alarm, motion devices , or a PTZ (Pan Tilt Zoom) camera to the system (not included).
11. **PAL / NTSC** : Switch between PAL and NTSC video output.

Keep the exaust fan on the side panel clear for proper ventilation.

Inadequate ventilation causes the unit to overheat.

CONTROL DEVICES

Remote Control

1. **POWER:** Press to power the system ON/OFF (password required).
2. **System Mode buttons**:
   - **MODE**: N/A.
   - **SETUP**: Opens the DVR Setup menu.
   - **ID**: Press to select the DVR ID (to control multiple DVRs with a single remote).
   - **F1**: Opens the System Information window.
   - **F2**: N/A.
   - **F3**: N/A
   - **REC START**: Starts panic recording.

   About the ID button: Changes the ID for the remote control to match the System ID (if changed). Exit to the main viewing screen, and press the **ID** button twice to open the REMOTE ID window. Press the number keys on the remote to assign the remote an ID and then press the ENTER key.
3. **Navigation / Menu buttons**:
   - **ENTER** : Press to confirm menu options/ selections.
   - **RETURN** : Press to cancel/deselect previous screen.
   - ▲: Press to move cursor up; increase values in certain menu options.
   - ▼: Press to move cursor down; decrease values in certain menu options.
   - ◀: Press to move cursor left.
   - ▶: Press to move cursor right.
   - ⏸ : Press to pause playback.
   - ◀◀ : Press to increase reverse playback speed 1X, 2X, 4X, 8X,16X, 32X, and 64X.
   - ▶▶ : Press to increase forward playback speed 1X, 2X, 4X, 8X, 16X, 32X, and 64X.
4. **MENU/ SEARCH / DISPLAY buttons**:
   - MENU: Opens the Quick Menu.
   - SEARCH: Opens the system search menu.
   - DISPLAY: Switches between single channel and 4-channel view.
5. **Channel buttons**: Press to view individual channels in full-screen; press to input passwords; when entering camera titles, press for alpha-numeric characters.
6. **Audio buttons**:
   - + / - : Not in use.
   - AUDIO: Not in use.
7. **Mode buttons**:
   - **P/T/Z (Pan, Tilt, Zoom)**: Press to open the PTZ control menu (on channels with PTZ cameras only, not included).
   - **KEYLOCK**: Press to open the Log Off window.
   - **SEQUENCE**: Press to start/stop Auto Sequence mode.
   - **ZOOM**: N/A
8. **ARCHIVE**: Press to open the Archive menu.

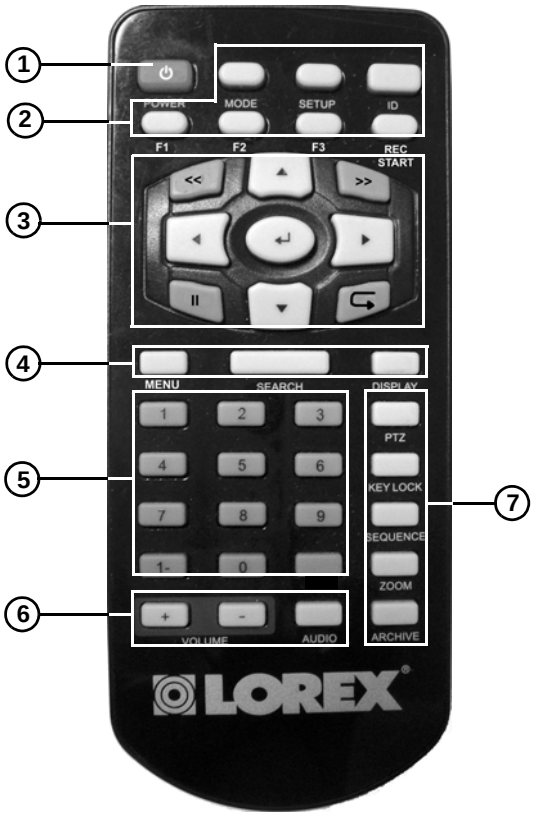


Figure 2.0 Remote Control.

SYSTEM NAVIGATION

Mouse Control

The mouse is an optional control device for the system.

To connect a USB mouse:

- Connect a USB mouse to the USB port on the front panel

NOTE: If using a PS/2 mouse (not included), a PS/2-to-USB adapter (not included) is required

1. **Left-Button**: While in a split-screen display mode, double-click an individual channel to view it in full-screen; double-click again to return to the split-screen display mode. While navigating menus, click to select a menu option.
2. **Right-Button**: Right-click anywhere on the screen to open the Quick Menu.
3. **Scroll-Wheel**: N/A

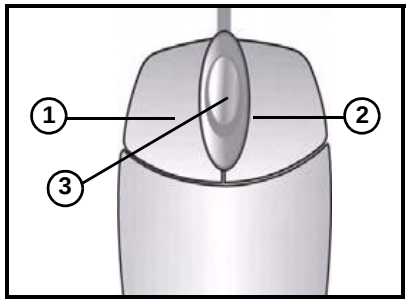


Figure 2.1Mouse buttons

Remote Control Navigation

When navigating the menus using the remote control, perform the following:

- Press the ▲▼◀▶ buttons to move the on-screen cursor
- Press the **ENTER** button ( ) to select an option
- Press the **RETURN** button ( ) to de-select the option

Quickly Access System Information

- To access vital system information such as your system's MAC address and IP address, press **F1** on your remote.

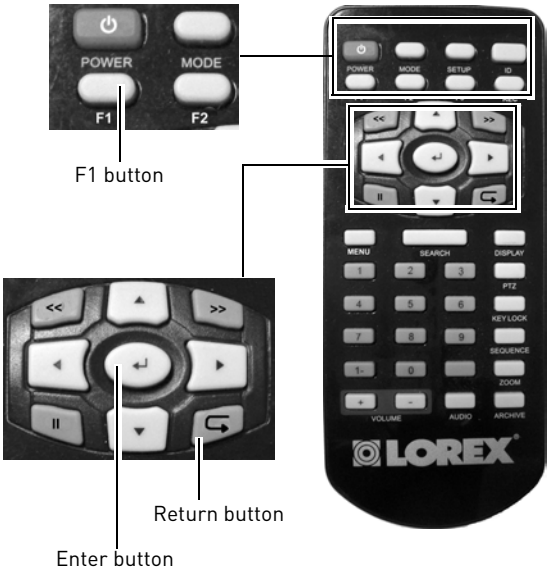


Figure 2.2 Accessing system information using the remote.

USING THE SYSTEM

Once the system is properly connected, you may power on your system and log in.

Powering on/off The System

To power on the system:

1. Connect the DC12V power adapter to the rear panel of the system.
2. Press the **POWER** button on the front panel.
   - The system powers on.
   - Wait for the system to boot up into the main screen.

To power off the system:

1. Press the **POWER** button on the front panel of the system.
   - A confirmation window opens.
2. Click **YES** to shut down the system.

or

1. Right-click anywhere on the screen.
   - The Quick Menu opens.
2. Click **SHUTDOWN**.
   - A confirmation window opens.
3. Click **YES** to shut down the system.

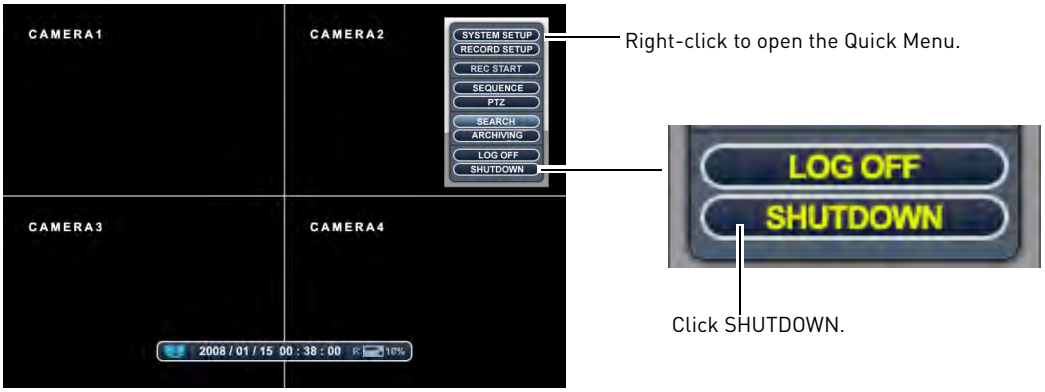


Figure 3.0 Powering off the system.

It is recommended to plug your system into a backup power supply (not included). Backup power supplies provide power to your system and cameras in case of an electrical outtage.

Logging In To The System

When you power on the system, it performs a hard drive and system integrity check. Wait for the system to boot into the main viewing window before operating.

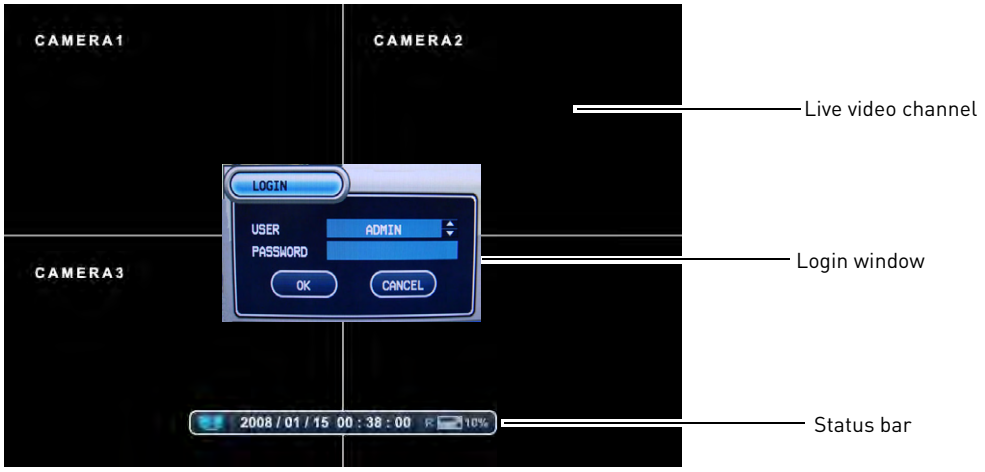


Figure 3.1 Main viewing window. (4-channel model shown).

NOTE: By default, the system login window is disabled. To enable password login to your system, see "Enabling and Disabling The System Password" on page 51.

To log in to the system (if password is enabled):

1. Double-click on the blank PASSWORD field in the Login window.
   - A Virtual Keyboard window opens.

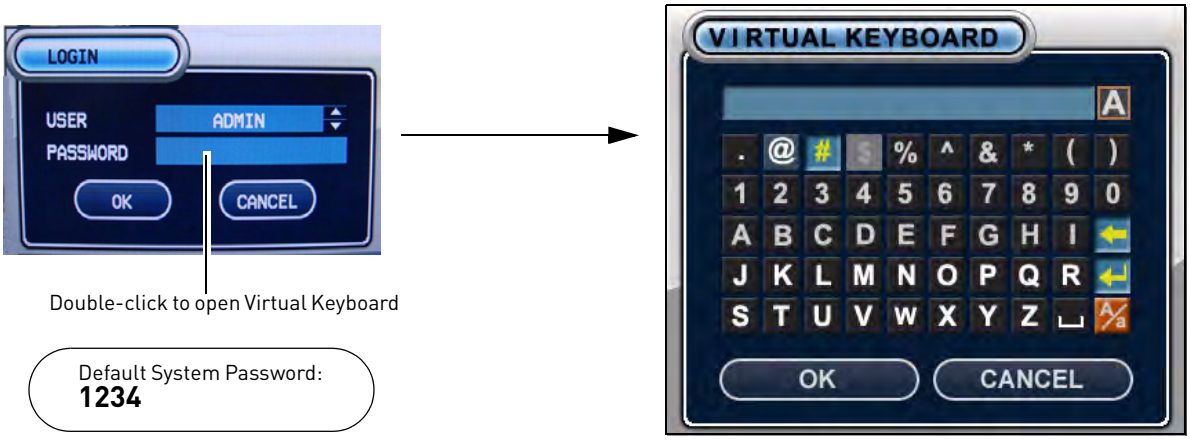


Figure 3.2 Entering your password into the Virtual Keyboard.

2. Enter **1234** and then click the **OK** button.
   - The Virtual Keyboard closes, and the Login window re-appears.
3. Click **OK** in the Login window.

Logging Out Of The System

To log out of the system:

1. Exit to the main viewing window if necessary.
2. Right-click anywhere on the screen.
   - The Quick Menu window opens.
3. Click **LOGOFF**.
   - The LOG OFF window opens.

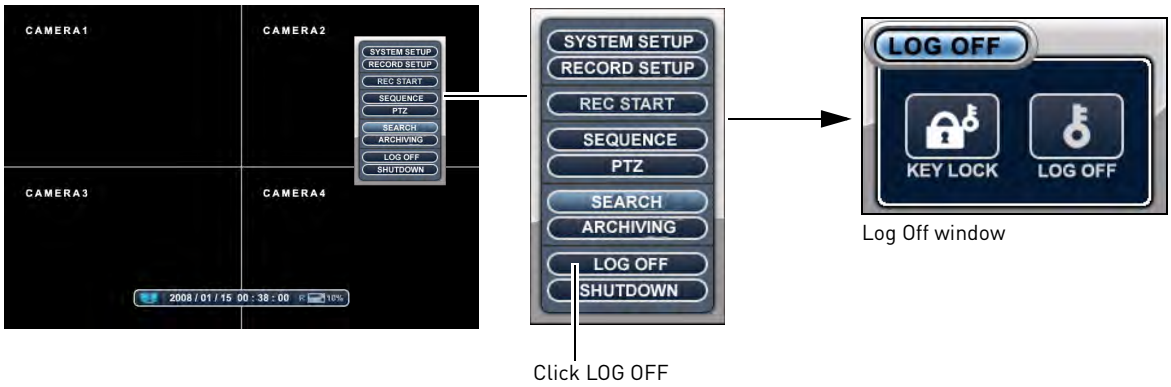


Figure 3.3 Logging off the system.

4. Click

(Log Off).
   - A Log off prompt window opens.
5. Click **YES** to log off the system.

The system disables the Quick Menu options when the system is logged out. You can continue viewing video streams when the system is logged out.

NOTE: Panic Recording, Sequence and PTZ remains enabled even when the system is logged out.

USING THE VIRTUAL KEYBOARD

Use the Virtual Keyboard to enter passwords and camera titles on the system.

To use the Virtual Keyboard:

1. Select any desired letter, number, or character.
2. Press **ENTER** on the remote control or front panel to confirm your selection; or click the **ENTER** button.

   NOTE: Click the "**A**"( ) button to shift between upper and lowercase letters.

Figure 3.4 Virtual Keyboard.

On-Screen Display

By default, the system launches with a live, quad-screen view also called the Main Viewing mode:

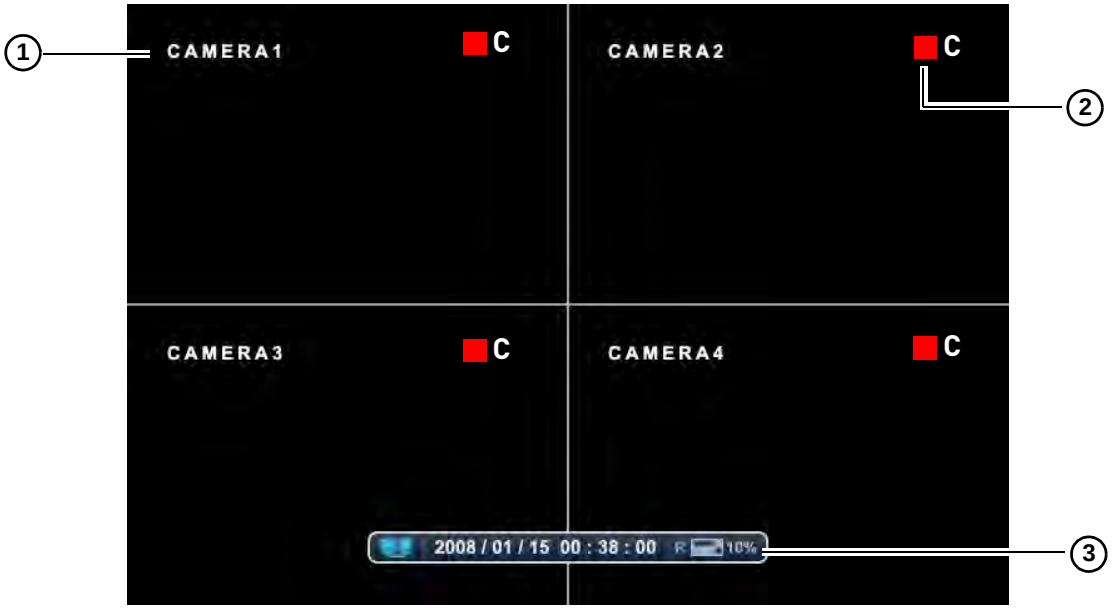


Figure 3.5 Main viewing mode (4-channel model shown).

1. **Channel Title**: Displays the channel number or title.
2. **Recording Status**: Different icons represent different recording modes: Continuous, Motion, Panic, and Alarm.

C **Continuous Recording**

M **Motion Recording**

P **Panic Recording**

A **Alarm Recording**

Figure 3.6 Recording Status types.

- **Continuous Recording** records 24 hours a day.
- **Motion Recording** records only when the camera detects movement.
- **Panic Recording** marks the video as a 'Panic' event, allowing for easy searchability.
- **Alarm Recording** marks the video when an alarm is triggered.

3. **Status Bar**: Displays system time, date, and recording status.

Figure 3.7 System status bar.

The Status Bar gives you an overview status of the system.

1. **Network Status**: Shows the status of the network connection. Blue=network connection is connected; Grey=network connection is not connected.
2. **Date & Time**: Shows the current date and time on the system.
3. **HDD Status**: "OW" indicates disk overwrite is enabled. For details, see "Disk Manage" on page 56.
4. **Hard Drive Storage Indicator**: Displays the percentage of the hard drive space used for video storage.

Changing Display Modes

The system has different display modes as well as an Auto Sequence mode.

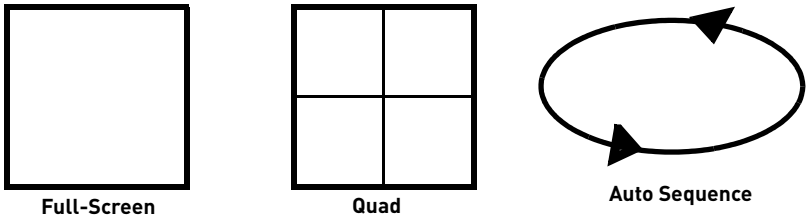


Figure 3.8 Display Viewing modes.

To change display modes:

- Press the **DISPLAY** button repeatedly until you reach the desired display mode.

USING AUTO SEQUENCE

Auto Sequence allows you to view channels in full-screen in an automatic sequence. In sequence mode, the screen cycles channels through the channels one channel at a time in full screen view.

To start Auto Sequence:

1. Press the **DISPLAY** button on the front control panel until the (Auto Sequence) icon appears near the top of the screen.

or

1. Right-click anywhere on the screen in the main viewing window.
   - The Quick Menu opens.
2. Click **SEQUENCE**.

   NOTE: You must exit from system setup menus before enabling Auto Sequence.

To customize the duration of the sequence, see "Monitor Tab" on page 38.

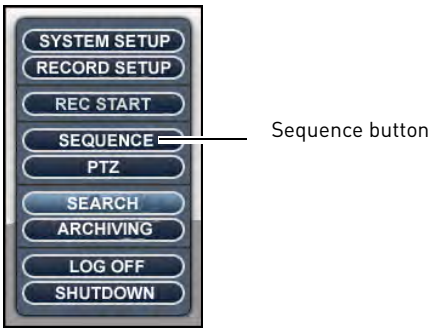


Figure 3.9 Enabling Auto Sequence.

Quick Menu

The Quick Menu gives you an overview of all the available settings on your DVR.

To open Quick Menu:

1. Right-click anywhere on the screen in the main viewing window.

   NOTE: If you are configuring the system, you cannot open Quick Menu.

or

1. Press the **MENU** button on the front panel.

Figure 4.0 Opening Quick Menu in the main viewing window.

Understanding the Quick Menu

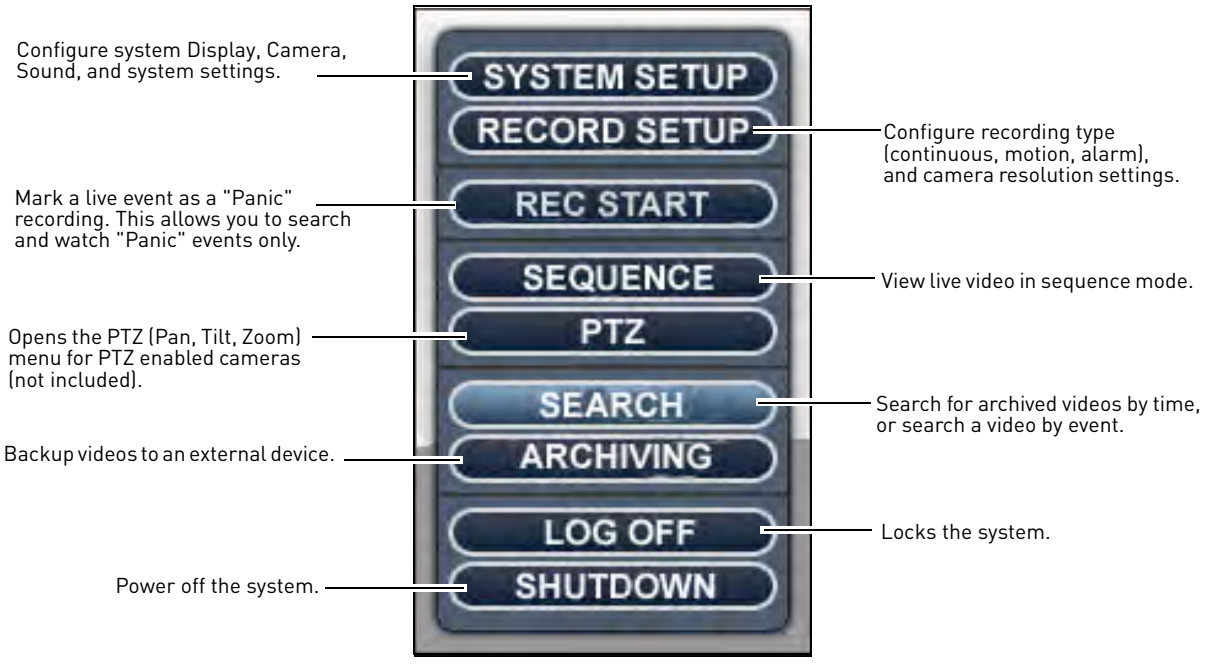

Configure system Display, Camera, Sound, and system settings.
SYSTEM SETUP
RECORD SETUP
Configure recording type (continuous, motion, alarm), and camera resolution settings.
Mark a live event as a "Panic" recording. This allows you to search and watch "Panic" events only.
REC START
SEQUENCE
View live video in sequence mode.
Opens the PTZ (Pan, Tilt, Zoom) menu for PTZ enabled cameras (not included).
PTZ
SEARCH
Search for archived videos by time, or search a video by event.
Backup videos to an external device.
ARCHIVING
LOG OFF
Locks the system.
Power off the system.
SHUTDOWN

Figure 4.1 Understanding the Quick Menu.

Searching For Video

You can search for videos by time, or search videos by event.

To open the Search menu:

1. Right-click anywhere in the main viewing window to open the Quick Menu.
2. Click the SEARCH button
   - The Search window opens.

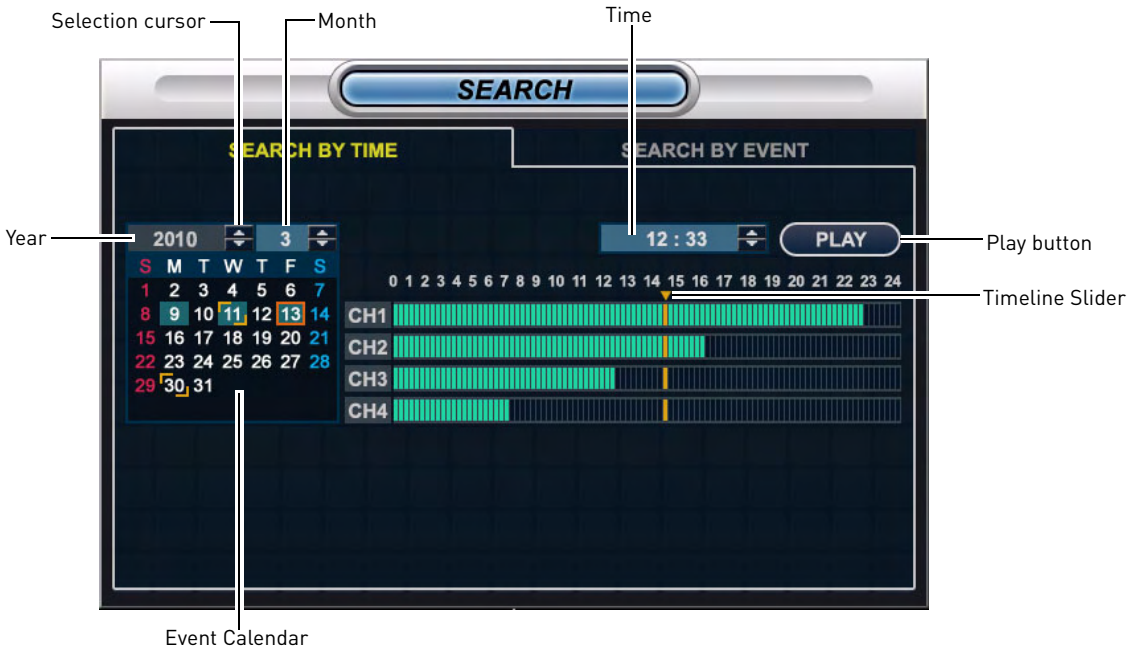


Figure 4.2 Search window layout.

SEARCHING FOR VIDEO BY TIME

Searching for video by time is useful if you know the approximate date and time an event occurred.

To search for an event by time:

1. Right-click anywhere in the main viewing window to open the Quick Menu.
2. Click the SEARCH button.
   - The Search window opens.
3. In the event calendar, select the Year and Month using the selection cursors.
4. Click on the date the event occurred.
   - The date highlights with an orange box.

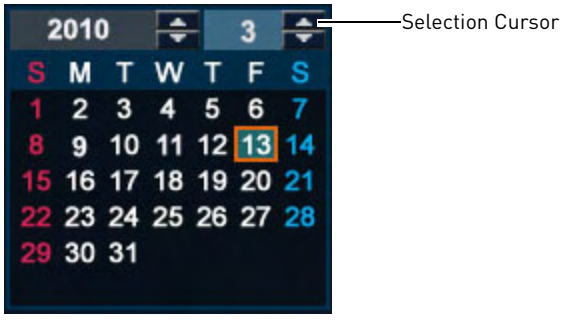


Figure 4.3 Event Calendar.

5. Double-click on the Hour, Minute and Second the event occurred to enter the time.
   • A number window opens each time you double-click on the Hour, Minute and Second.

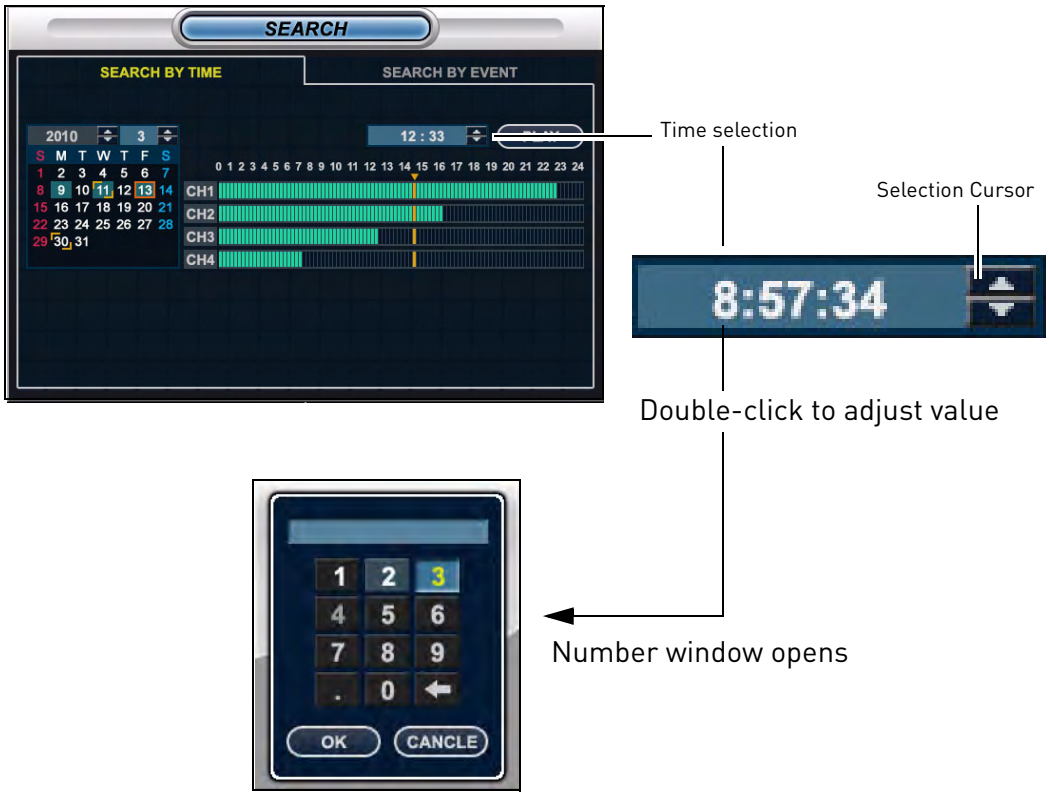


Figure 4.4 Adjusting video search time.

   • Enter the desired value and click the **OK** button to save your settings.

OR

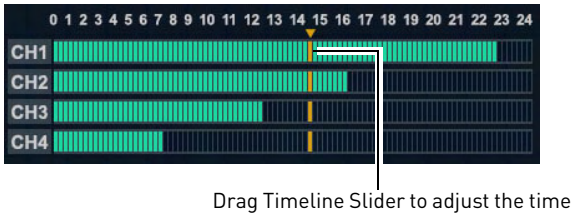


Figure 4.5 Adjusting the time using the Timeline Slider

   • Drag the Timeline Slider to adjust the time.

OR

   • Click the hour/minute and then use the selection cursor to adjust the values.

6.Click PLAY to view the video.

   • The video playback screen opens.

SEARCHING FOR VIDEO BY EVENT

Searching for video by event allows you to sort video events by category. For example, if you want to view all the events where the camera detected movement, you can search by motion.

To search a video by event:

1. Right-click anywhere in the main viewing window to open the Quick Menu.
2. Click the SEARCH button.
   - The Search window opens.
3. Click the **SEARCH BY EVENT** tab.
   - The Search By Event window opens.

SEARCH
SEARCH BY TIME
SEARCH BY EVENT
FROM 02 / 10 / 2010 10:52
TO 02 / 19 / 2010 10:52
ALARM
MOTION
CONTINUOUS
OTHER
CH 1 CH 2 CH 3 CH 4
START
DATE TIME LOG
2010 / 12 / 15 15:13:32 PANIC RECORD START: CH1
2010 / 12 / 15 15:13:32 Alarm 2
2010 / 12 / 15 15:13:32 Motion Event
2010 / 12 / 15 15:13:32 Door is open
2010 / 12 / 15 15:13:32 Alarm 2
2010 / 12 / 15 15:13:32 Motion Event
2010 / 12 / 15 15:13:32 Door is open
◄ PREV
NEXT ►
Select date and time range
Select channel(s)
Select event type
Click Start to begin search
Click to view the next page of the log

Figure 4.6 Search by Event window.

4. Under SEARCH BY TIME, select the date and time range the event occurred.
   - Click on the Hour, Month, Year, Time, and then use the ▲▼(selection cursors) to adjust the values.

OR

   - Double-click on the Hour, Month, Year, time to use the number window to enter the value.
5. Select the channel you wish to search under (Channels 1~4)
6. Under SEARCH BY EVENT, select the type of event you wish to search for.
   - Search by: Alarm, Motion, Continuous, Other.
7. Click START to begin video search.
   - The event types populate in the Log.
8. Double-click on the date or time of the event to begin playback.

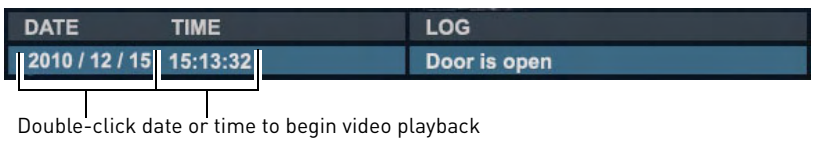


Figure 4.7 Starting video playback.

VIDEO PLAYBACK CONTROLS

The video playback controls allows you to navigate through the video. The playback window opens after you **START** or **PLAY** in the Search menu.

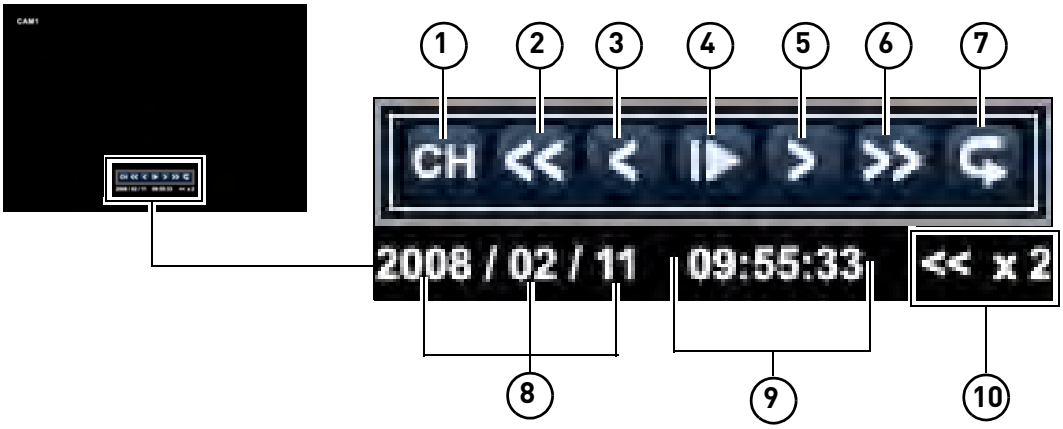


Figure 4.8 Video playback controls.

1. **Channel List**: Click to adjust playback view (single-channel view, or Quad view).
2. **Increase Reverse Playback Speed**: Speed up reverse playback.
3. **Reverse Playback**: Watch video backward.
4. **Play/Pause**: Click once to play. Click again to pause.
5. **Forward playback**: Watch video forward in normal speed (1x).
6. **Increase Forward Playback Speed**: Fast forward video playback.
7. **Exit video playback**: Exits the playback screen and returns to main system view.
8. **Date**: Displayed as Year, Month, Date by default.
9. **Video Timeline**: Displays the current time of the event being played.
10. **Video Playback Speed Indicator**: Displays forward and reverse playback speed.

ARCHIVING VIDEO

The system allows you to archive your videos onto external media such as a USB memory stick, or an external hard drive.

Hardware required:

- A blank USB memory key (2 Gigabytes and up recommended) or an external USB hard drive

To back up video onto an external device:

1. Insert a blank USB memory key or USB hard drive into the USB port on the front panel of the system.
2. Right-click anywhere in the main viewing window to open the Quick Menu.
3. Click ARCHIVING .
   - The Archiving window opens.

Figure 5.0 Archiving menu.

4. Beside the **FROM** and **TO** fields, select the Year, Month, Date, Time you wish to back up.
   - Click on the desired value and use the buttons to adjust the values.

OR

   - Double-click on the Year, Month, Date, Time to use the number window to enter the value.
5. Beside **CH1**, **CH2**, **CH3**, **CH4**, select the channels you wish to back up.
6. Beside the **Include Audio** and **Include Log** checkbox, select whether you want the back up to include audio or a system log.
7. Beside **DEVICE**, select the back up device using the buttons.
8. Beside MODE, select **ERASING & BURNING** to format the USB memory key before backing up the video contents.
   - Select BURNING to back up the video onto the USB memory key.
9. Click **START** to begin video back up.

Viewing Archived Video

Once you have backed up video onto your USB memory key or USB hard drive, you can view the video on your PC. The system includes a proprietary video player called **Backup Player**. Use Backup Player to play video archived video from your USB device.

Prerequisites:

- A free USB port

To view archived video from your USB memory key / USB hard drive:

1. Insert the USB memory key or USB hard drive into the computer's USB port.

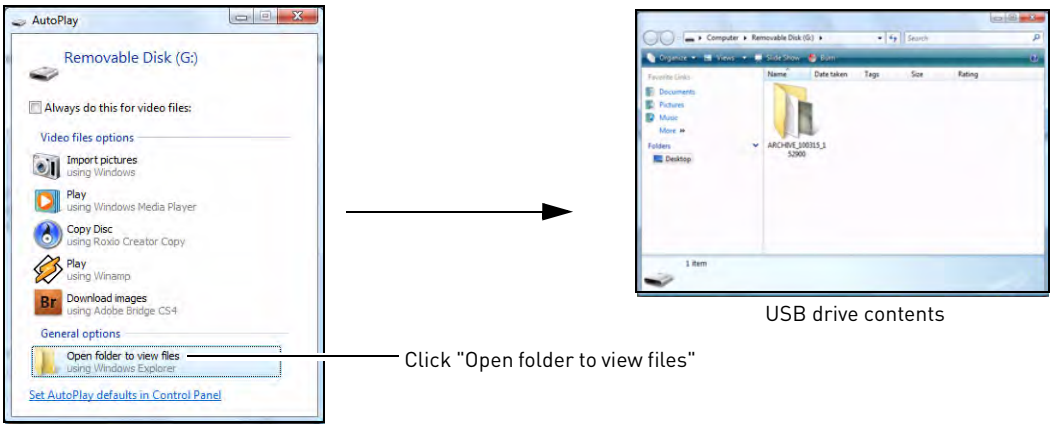


Figure 5.1 AutoPlay window in Windows Vista/7.

2. Browse your system for your USB device.
   - **On Windows XP**: Double-click **My Computer** and then double-click the Removable Disk directory (or the name of your USB hard drive).
   - **On Windows Vista/7**: An autoplay window pops-up. Click "Open folder to view files" to browse your USB device
3. Double-click the folder named **ARCHIVE _XXXXXX_XXXXXX** (where X is the date, year, time) in the USB memory key/hard drive directory.

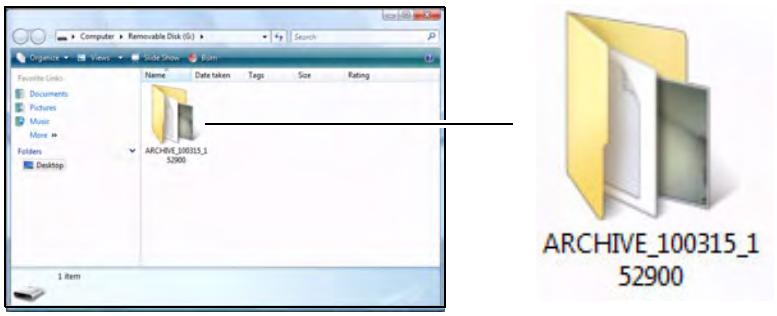
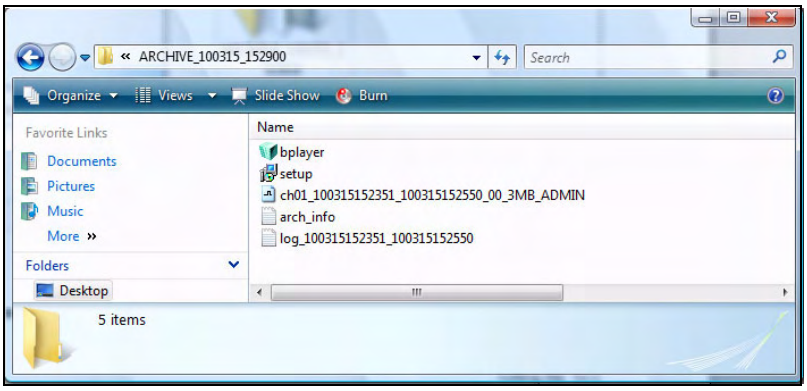


Figure 5.2 USB device directory.

4. Double-click on **setup.exe** to install the video codec.
   - Follow the on-screen instructions and install the video codec.



USB Folder Contents:

- **bplayer** (Backup Player): Proprietary video player.
- **setup.exe**: Video codec required to watch the video.
- **arch_info.txt**: A technical log of the archived video.
- AVI video file: Shown as "Ch01_XXXX .....", where CH01 is dependant on what channel you chose to back up.
- Log file: Displays what time the archive was made, and by which user.

Figure 5.3 Backup Player contents.

5. Double-click on **bplayer.exe** to start the video player.
   - The Backup Player opens.

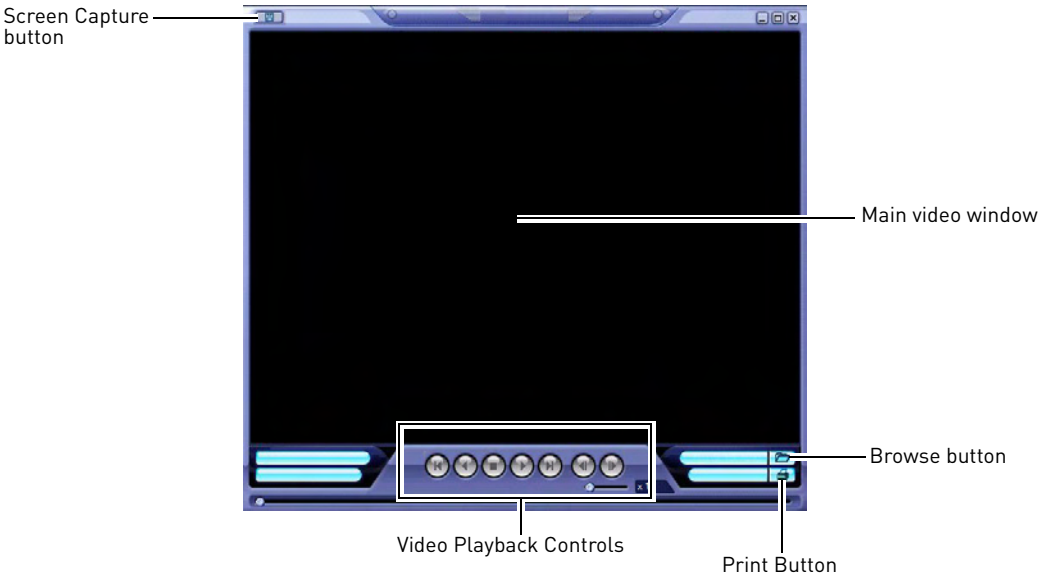


Figure 5.4 Backup Player interface.

6. Click the Browse button on the bottom-right hand corner of the screen (Figure 5.4).
   • An "Open" window appears.
7. Double-click on the video file.
   • A Watermark notification window opens.
8. Click **YES** to begin video playback.

NOTE: By default, the "Open" window automatically opens in the same directory where the video file is located. If this is not the case, manually browse for your video file.

Backup Player Playback Controls

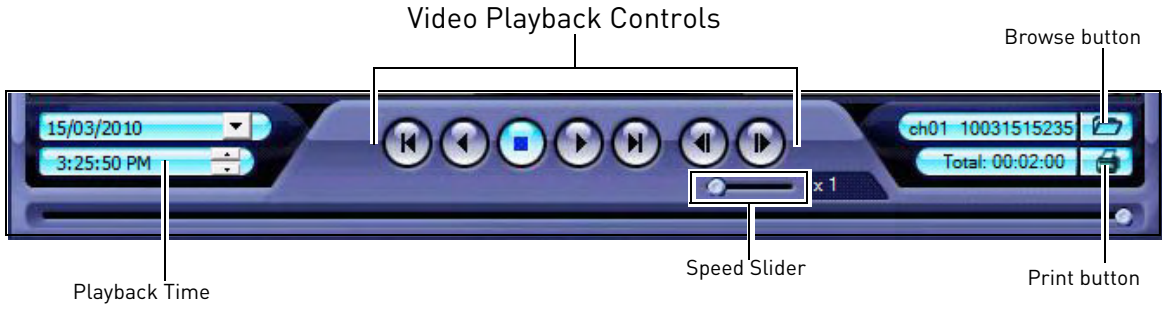


Figure 5.5 Backup Player Controls.

- In the Playback Time display, you can manually enter the time you wish to jump to.
- Use the Print button to print a screen capture of the current video being played. Stop the video before pressing the Print button.
- Click the Screen Capture button on the top-left corner of the player to print a BMP (bitmap) or JPG (Jpeg) image.

Panic Recording

Panic recording tags the video as a "Panic" recording, and records video with the highest quality settings. Tagging a video as "Panic" allows you to search for the video as a Panic recording.

To start Panic recording using the mouse:

1. Right-click anywhere on in the main viewing window to open the quick menu.
2. Click **REC START.** The recording icon on the top-right corner of the channel changes to **P** (Panic).
3. To exit Panic recording, right-click to open the quick menu and click **REC START** to stop panic recording.

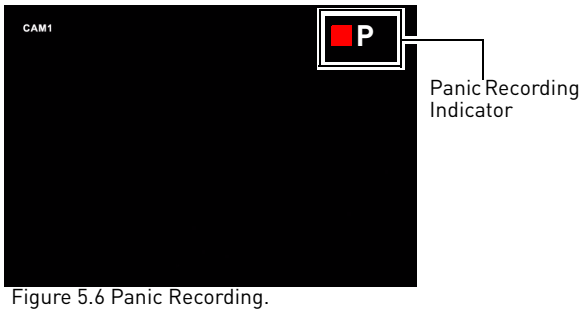


Figure 5.6 Panic Recording.

To start Panic recording using the remote:

1. Press the **REC START** button in viewing mode (must exit from all system menus).
2. Press the **REC START** button again to stop panic recording.

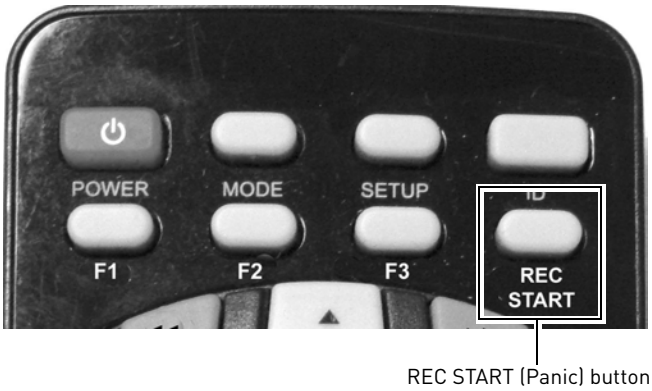


Figure 5.7 Triggering panic recording using the remote.

Searching for Panic Recording Video

Once you have "bookmarked" panic events, you can search your video archive for "panic" video events.

To search for Panic Recording Video:

1. Right-click anywhere in the main viewing window to open the Quick Menu.
2. Click the SEARCH button.
   - The Search window opens.
3. Click the **SEARCH BY EVENT** tab.
   - The Search By Event window opens.

SEARCH
SEARCH BY TIME
SEARCH BY EVENT
FROM 02 / 10 / 2010 10:52
TO 02 / 19 / 2010 10:52
ALARM
MOTION
CONTINUOUS
OTHER
CH 1 CH 2 CH 3 CH 4
START
DATE TIME
LOG
2010 / 12 / 15 15:13:32 PANIC RECORD START: CH1
2010 / 12 / 15 15:13:32 Alarm 2
2010 / 12 / 15 15:13:32 Motion Event
2010 / 12 / 15 15:13:32 Door is open
2010 / 12 / 15 15:13:32 Alarm 2
2010 / 12 / 15 15:13:32 Motion Event
2010 / 12 / 15 15:13:32 Door is open
◀ PREV
NEXT ▶
Panic event

Figure 5.8 Search menu populating a panic event in the log list.

4. Double-click on the field that shows a "panic" recording to begin playback.

SETTING THE TIME

Set the time before recording. Inaccurate time stamps on videos reduces the effectiveness of the surveillance video as evidence. The time can be synchronized to a Network Time Server, or can be set manually.

To set the date and time:

1. Right-click anywhere on in the main viewing window to open the quick menu.
2. Click SYSTEM SETUP.
   - The System Setup window opens.

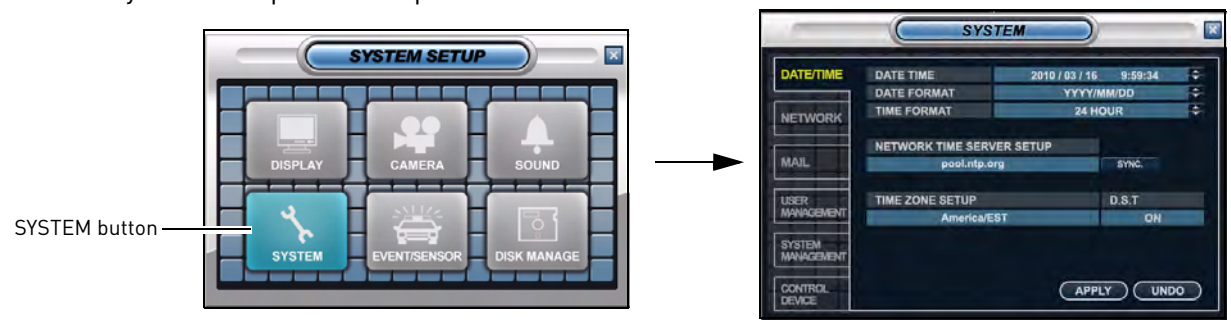


Figure 6.0 System Setup Menu.

3. Click SYSTEM (System).
   - The System window opens.
4. Beside **DATE TIME**, click on the time (yyyy/mm/dd; hh/mm/ss) and adjust the values using the buttons.

OR

   - Double-click the values to open the number window to input the values.

5. Beside **DATE FORMAT**, use the button to adjust the date format.
6. Click **APPLY** to save your settings.

ATTENTION

If the saved time is earlier than the current time on the system, you will be warned that overlapped data will be erased.

Click **YES** to accept the changes. Please allow a few moments for the overlapped video data to be deleted.

Automatic Time Synchronization

- Click the SYNC. button to synchronize your time with a time server. You must connect the system to the internet to synchronize your system time.

Daylight Savings Time

- To enable daylight savings, under **D.S.T**, select **ON** using the button and then click **APPLY**.

RECORDING

By default, the system is set to record continuously at startup from any connected cameras. It is highly recommended to keep continuous recording on at all times.

The system can perform Continuous Recording, Motion Recording, Alarm Recording, and Panic Recording. You can set a customized daily or weekly recording schedule using these recording modes. For details, see “Configuring Recording Settings” on page 28.

Continuous Recording

By default, all camera channels are enabled with continuous recording. During Continuous Recording, the letter "**C**" appears in the top-right corner of each channel.

Figure 6.1 Continuous Recording.

Motion Recording

The system will **only** record when motion is detected by a camera. When Motion Recording is enabled, an "M" in the top-right corner of every channel indicates the system is recording. You can set the pre and post recording time in the Recording Operations menu.

For details, see “Configuring Recording Modes (Simple Recording)” on page 29.

Figure 6.2 Motion Recording icons (inactive and active)

Alarm Recording

When an alarm input is triggered, the system continues to record, but can apply unique recording parameters that you can set in the Alarm menu. You can also set the system to activate an alarm output. For example, if a window sensor (not included) connected to the alarm input block on the rear panel is triggered, the system begins alarm recording. The system simultaneously activates an external siren (not included) connected to the alarm output block on the rear panel.

For details, see “Alarm Input” on page 53.

Panic Recording

Press the **REC START button** on the remote control or right-click in the main viewing window, and click on **REC START**. Panic Recording features the highest quality recording parameters available on the system. A "**P**" appears in the top-right corner during Panic Recording. For details on enabling Panic recording, see “Panic Recording” on page 27.

Figure 6.3 Panic Recording icon (top-right corner)

Recording Audio

The system can record one channel of audio. You must have an audio enabled camera or self-powered microphone connected to the system to use this function (not included). You can enable/disable audio recording in the Continuous/Motion Recording menu. For details, see “Sound” on page 43.

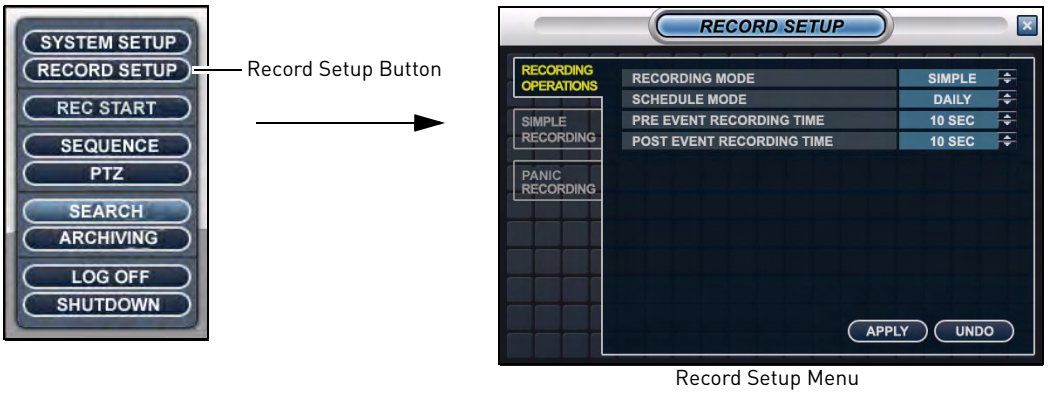
CONFIGURING RECORDING SETTINGS

To access Record Setup menu:

1. Right-click anywhere in the main viewing window.
   • The quick-menu opens.

Figure 7.0 Opening the Quick Menu.

2. Click RECORD SETUP .
   • The Record Setup menu opens.



Record Setup Menu

Figure 7.1 Opening the Record Setup window.

ADJUSTING PRE & POST EVENT RECORDING TIME

After an event occurs in the system, such as a motion event, you can configure how many seconds before and after the system continues to record.

To configure Pre Event and Post Event recording time:

1. Right-click anywhere in the main viewing window.
   • The quick-menu opens.
2. Click RECORD SETUP .
   • The Record Setup menu opens.

3. Beside **PRE EVENT RECORDING TIME**, use the buttons to adjust the pre-event recording time in seconds (1~5 seconds).

4. Beside **POST EVENT RECORDING TIME**, use the buttons to adjust the post-event recording time in seconds (5~180 seconds).

5. Click APPLY to save your settings.

CONFIGURING RECORDING MODES (SIMPLE RECORDING)

You can customize what time the system records in Contiuous, Motion or Alarm mode.

- Continuous recording mode sets the system to record in a loop, regardless if the camera captures any movement.
- Motion recording only records when the camera detects movement.
- Alarm recording marks the video as an "Alarm" event when an external sensor (not included) connected to the alarm block in the system is triggered.

To configure the type of recording mode during a particular time:

Enable Simple Recording Mode

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.
2. Click RECORD SETUP .
   - The Record Setup menu opens.

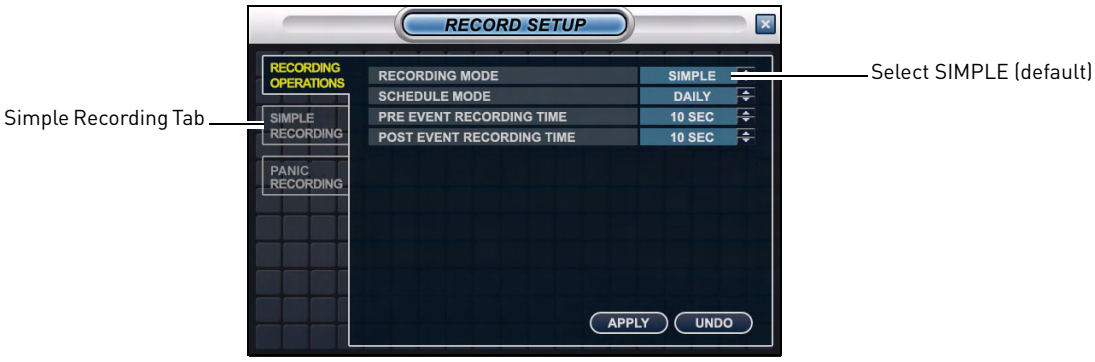


Figure 7.2 Enabling Simple Recording mode.

3. Beside **RECORDING MODE**, select **SIMPLE** (default) using the buttons.

4. Click APPLY to save your settings.

Configure Recording Quality, Screen Resolution and Frame Rate

1. Click the **SIMPLE RECORDING** tab on the left.
   - The Simple Recording window opens.

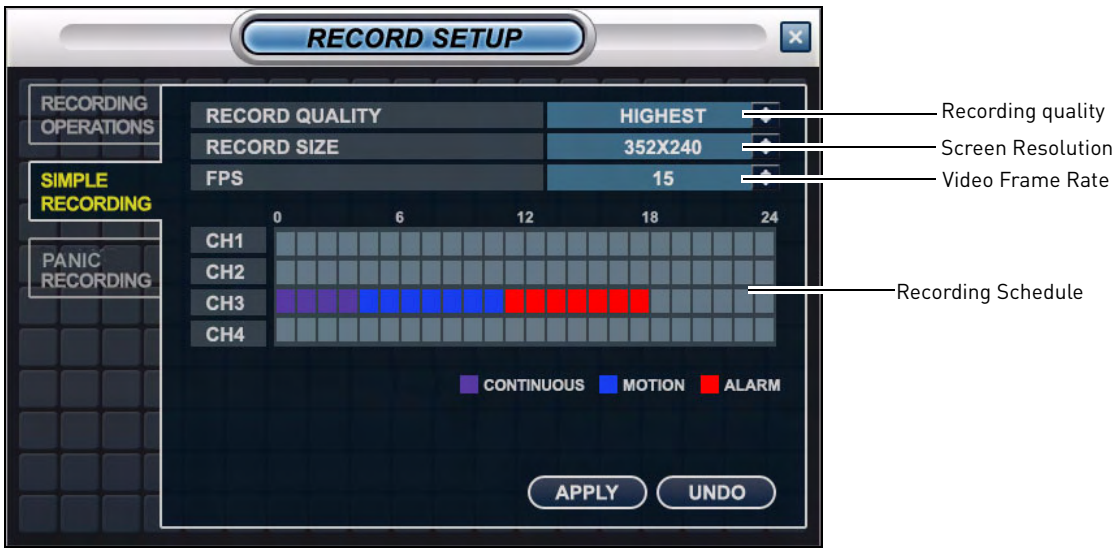


Figure 7.3 Record Setup - Simple Recoring mode.

2. Beside **RECORD QUALITY**, select the video recording quality (Low, Standard, High, Highest) using the buttons .

3. Beside **RECORD SIZE**, select the video resolution that the camera records at using the buttons.
   - Recording resolutions: 352 x 240 at 30 FPS / 704 x 240 at 15 FPS / 704 x 480 at 7 FPS /

4. Beside **FPS**, select the video frame rate of the cameras using the buttons.

NOTE: The recording settings applied in steps 2 to 4 are global and apply to all of the cameras. To configure each camera individually, you must switch the recording setup to Advanced Recording. For details, see “Configuring Recording Modes (Advanced Recording)” on page 31.

Configure Recording Schedule

1. Drag the mouse cursor in the Recording Schedule to select the duration you wish to enable a recording type.

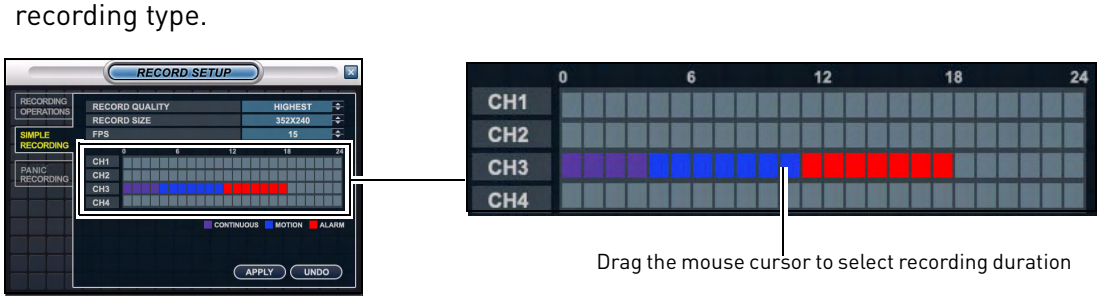


Figure 7.4 Configuring recording schedule duration.

Figure 7.5 Recording pop-up menu.

• A Recording Type pop-up opens.
2.Select the type of recording you want to enable (Continuous, Motion, Alarm).
3.Click **OK** to save your settings.

Scheduling Tips

• Customize the recording schedule according to foot traffic in a particular area. For example, if you monitor a vacant parking lot with light traffic, consider setting Motion recording. This reduces video storage space, and enables the camera to only record when there is movement.

• Customize the recording schedule of when it is busiest. For example, you may only want Continuous recording during the day to monitor a high traffic area.

CONFIGURING RECORDING MODES (ADVANCED RECORDING)

Advanced Recording allows you to customize how the camera records depending on the time of day. For example, you can have Camera 1 record at a higher resolution during the day, and record at a lower resolution at night. You can also configure the type of recording each camera will record at depending on the time of day. You can schedule the Advanced Recording mode to Daily or Weekly.

Daily recording settings apply the same recording settings to all 7 days of the week. Weekly recording settings are customizable for each day of the week.

To configure Advanced Recording mode:

Enable Advanced Recording

1. Right-click anywhere in the main viewing window.
   • The quick-menu opens.
2. Click RECORD SETUP .
   • The Record Setup menu opens.
3. Beside **RECORDING MODE**, select **ADVANCED** using the buttons.
4. Click APPLY to save your settings.
   • The **SCHEDULE MODE** option is now enabled. For details on configuring Weekly Schedule mode, see "Customizing Recording Type (Weekly mode)" on page 35.

Figure 7.6 Enabling Simple Recording mode.

- The **ADVANCED RECORDING** tab appears on the left.

Figure 7.7 Enabling Advanced Recording.

5. Click the **ADVANCED RECORDING** tab on the left.
   - The Advanced Recording Menu opens.

Figure 7.8 Customizing recording quality.

Customize Recording Quality

You can customize the recording quality depending on the hour of the day. For example, you may want your cameras to record at the highest quality between 9:00am and 4:00pm, and reduce the video quality after 4:00pm to conserve storage space.

To customize video recording quality:

1. Drag your mouse cursor across the Recording Timeline (Figure X) and select the desired hour you wish to customize the recording quality.

- A Recording Quality window opens.

Figure 7.9 Configuring recording quality.

2. For each camera, customize the following using the buttons:
   - **Size**: Customize the video resolution
   - **FPS (Frames Per Second)**: Adjust the video frame rate. Higher frame rates yield smoother video, but increase file sizes.

   NOTE: The Frame rate indicator displays the remaining frames that you can allocate to the cameras.

   - **Quality**: Adjust video quality. Higher video quality yields higher quality video images, but increase file sizes.
   - **Audio**: Enable or disable audio (audio capable cameras only).
   - **Alarm**: Enable or Disable external alarm devices (not included).

3. Click **OK** to save your settings. Repeat as necessary for different times.

Customizing Recording Type (Daily mode)

After you customize each camera's recording quality, you must assign each camera's recording type. For example, you may want Camera 1 to record with Continuous recording between 9:00 am until 11:00 am. Then you may want Camera 1 to record with Motion recording between 11:30 am until 3:00 pm.

To customize the camera's recording type in Daily mode:

1. Click the **ACTIVATION** tab.
   - The Activation tab opens.

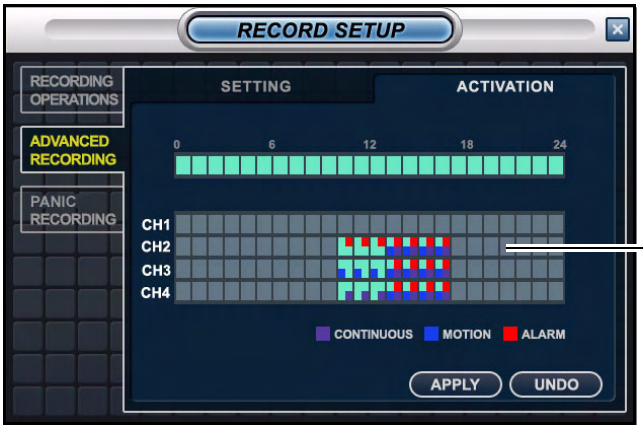


Figure 7.10 Customizing camera recording type (Daily mode).

2. Drag the mouse cursor in the Camera Schedule to select the time range you want a particular recording event to take place.
   - A Recording pop-up window opens.

Figure 7.11 Recording pop-up menu.

3. Select the recording type (Continuous, Motion, Alarm) and then click **OK**.
4. Click APPLY to save your settings.
5. Repeat the process as needed.

Customizing Recording Type (Weekly mode)

To customize the camera's recording type in Weekly mode:

1. Click the **RECORDING OPERATIONS** tab on the left.
2. Beside **RECORDING MODE**, select **ADVANCED** using the buttons.
3. Beside **SCHEDULE MODE**, select **WEEKLY** using the buttons.
4. Click to save your settings.
5. Click the **ADVANCED RECORDING** tab on the left.
6. Click the **ACTIVATION** tab.
   - The Activation tab opens.

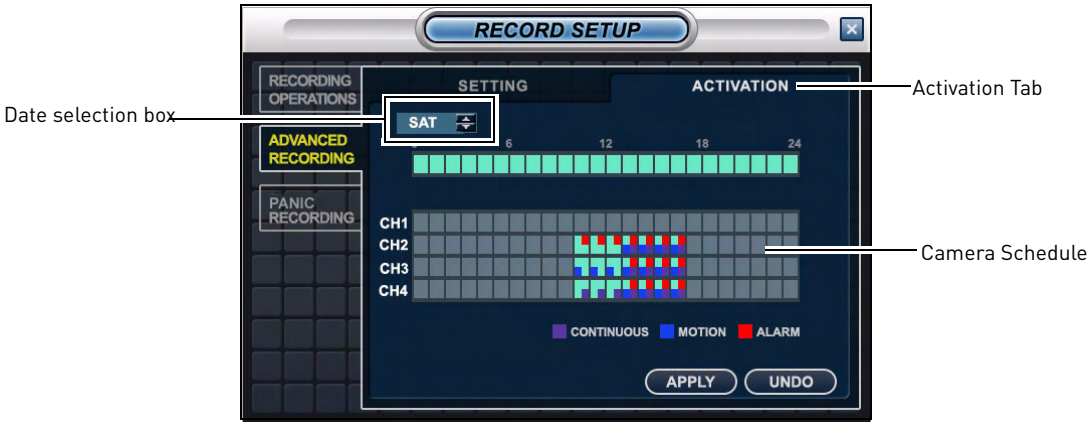


Figure 7.12 Customizing camera recording type (Weekly mode).

7. In the Date selection box, select the day you wish to apply the settings to.
8. Drag the mouse cursor in the Camera Schedule to select the time range you want a particular recording event to take place.
   - A Recording pop-up window opens.

Figure 7.13 Recording pop-up menu.

9. Select the recording type (Continuous, Motion, Alarm) and then click **OK**.
10. Click to save your settings.
11. Repeat the process as needed.

CONFIGURING PANIC RECORDING

Panic recording allows the camera to switch into "panic" mode, and mark the video as a panic event. When a camera is in panic mode, it automatically adjusts its recording parameters, and records at a higher video quality. You can customize the recording quality of your camera in panic recording to suit your preferences.

To configure Manual Recording settings:

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.
2. Click RECORD SETUP .
   - The Record Setup menu opens.
3. Click the **PANIC RECORDING** tab on the left.
4. The Panic Recording menu opens.

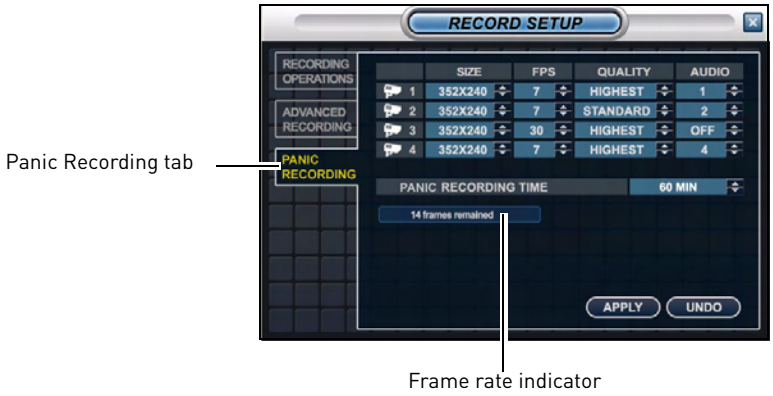


Figure 7.14 Configuring Manual Recording settings.

5. For each camera, customize the following using the buttons:
   - **Size**: Customize the video resolution
   - **FPS (Frames Per Second)**: Adjust the video frame rate. Higher frame rates yield smoother video, but increase file sizes.

     NOTE: The Frame rate indicator displays the remaining frames that you can allocate to the cameras.

   - **Quality**: Adjust video quality. Higher video quality yields higher quality video images, but increase file sizes.
   - **Audio**: Enable or disable audio in panic recording mode (audio capable cameras only, not included).
   - **Panic Recording Time**: Adjust the maximum duration of panic recording.
6. Click **APPLY** to save your settings.

CONFIGURING SYSTEM SETUP

System setup allows you to configure the system's Display, Camera, Sound, System, Sensor, Network and Hard Drive recording settings.

To open the System Setup menu:

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.

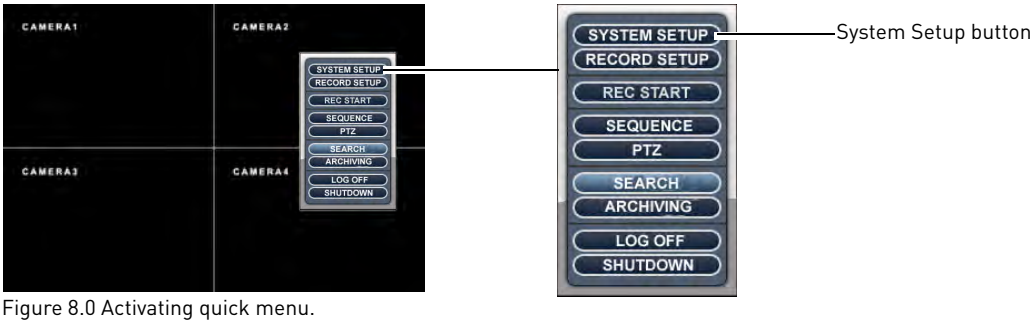


Figure 8.0 Activating quick menu.

2. Click SYSTEM SETUP.
   - The System Setup menu opens.

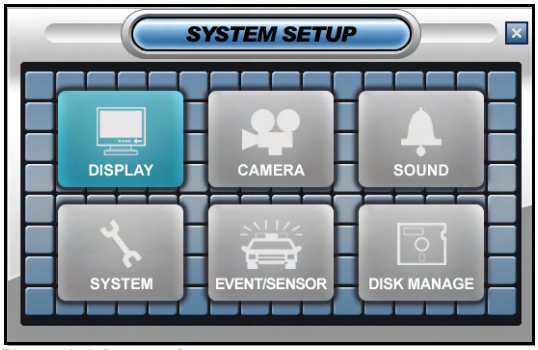
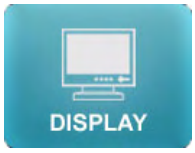


Figure 8.1 System Setup menu.

System Setup Overview

- **Display:** Configure system OSD (On-screen display), language, and display options.
- **Camera:** Configure camera color adjustments, PTZ Camera settings, and motion sensor settings.
- **Sound:** Configure system buzzer and live audio from audio-enabled cameras (not included).
- **System:** Configure Network, User management
- **Event/Sensor:** Configure external alarm sensor devices (not included) and system notification settings.
- **Disk Manage:** Configure hard drive recording and formatting settings.

DISPLAY



The Display tab configures the system OSD (On-screen display), language and display options.

To open the Display menu:

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.
2. Click SYSTEM SETUP.
   - The System Setup menu opens.
3. Click **DISPLAY**.
   - The Display menu opens.

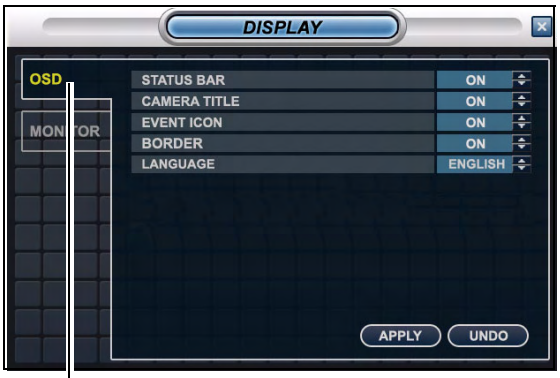


Figure 9.0 Display OSD setting window.

OSD TAB

Changing OSD (On Screen Display) options:

1. Configure the following using the buttons:
   - **STATUS BAR**: Toggle **ON/OFF** to enable or disable the system status bar.
   - **CAMERA TITLE**: Toggle **ON/OFF** to enable or disable the camera title on the top-left corner of the channel.
   - **EVENT ICON**: Toggle **ON/OFF** to enable or disable the recording icon of the system on the top-right corner of the channel.
   - **BORDER**: Toggle **ON/OFF** to enable or disable the black border around the channels.
   - Beside **LANGUAGE**, use the buttons to change the system language.
2. Click **APPLY** to save your settings.

MONITOR TAB

Changing Motion , Alarm Pop-up, Spot and Sequence settings:

1. Click The **MONITOR** tab on the left.
   - The Monitor tab opens.

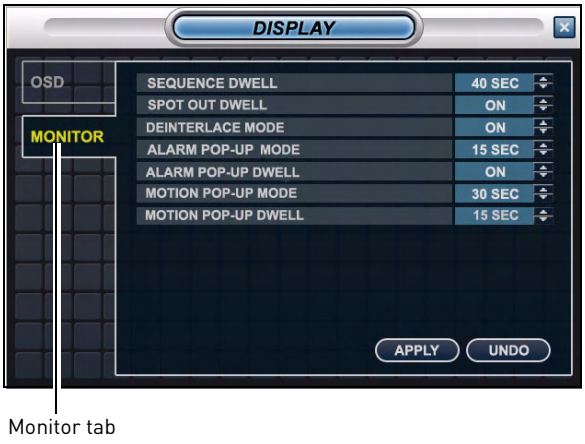


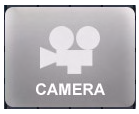
Figure 9.1 Display Monitor setting window.

1. Configure the following using the buttons:
   - **SEQUENCE DWELL**: Adjust the duration of how long the a channel remains on screen in Sequence mode.
   - **SPOT OUT DWELL**: Adjust the duration of how long the channel remains on screen in Spot Out mode.
   - **DEINTERLACE MODE**: Deinterlace mode increases image sharpness. Turn on/off to enable or disable.
   - **ALARM POP-UP MODE**: If Alarm Pop-Up mode is enabled, the channel

automatically displays in full screen when an alarm event is triggered.

- **ALARM POP-UP DWELL**: Adjust the duration that the Alarm-pop-up channel remains on screen.
- **MOTION POP-UP MODE**: If Motion Pop-Up-Mode is enabled, the channel with motion detected displays in full screen.
- **MOTION POP-UP DWELL**: Adjust the duration the Alarm-Pop-Up window remains on screen.

2. Click **APPLY** to save your settings.



CAMERA

Use the Camera menu to configure camera title, color, PTZ and motion settings.

To open the Camera menu:

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.
2. Click SYSTEM SETUP.
   - The System Setup menu opens.
3. Click **CAMERA**.
   - The Camera setup window opens.

Figure 10.0 Camera Setup menu.

CAMERA TITLE TAB

Changing the Camera Title

To change a camera title:

1. Under TITLE, double-click the field to open the Virtual Keyboard.
2. Enter a title for the camera (up to eleven alphanumeric characters), and click **OK**. The Virtual Keyboard closes.
3. Click **APPLY** to save your settings.

Enabling Covert Mode

To enable/disable covert camera:

1. Under COVERT, click to turn ON/OFF covert mode.
   - If ON, the channel will appear blacked out on-screen, but the system will actually be recording.
2. Click **APPLY** to save your settings.

COLOR SETUP TAB

Adjusting Camera Brightness and Color

To adjust camera color settings:

1. Click the **COLOR SETUP** tab on the left.
   - The Color Setup tab opens.

Figure 10.1 Color Setup menu.

2. Double-click on the value you wish to adjust in the desired channel.
   - The channel opens in full-screen with a color-configuration bar near the bottom of the window.

Figure 10.2 Color Configuration bar.

3. Click to adjust the Brightness, Contrast, Tint and Color Values.
4. Beside , click to change the camera channel.
5. Click the Close button ( ) to exit and save your settings.

PTZ SETUP TAB

PTZ Setup

Use the PTZ Setup menu to configure any connected PTZ cameras (not included).

> **NOTE:** Make sure your PTZ camera is properly connected to the system prior to configuring PTZ options. Please refer to your PTZ camera's instruction manual to determine the correct settings for your PTZ camera.

To configure PTZ settings:

1. Click the **PTZ SETUP** tab on the left.
   - The PTZ Setup tab opens.

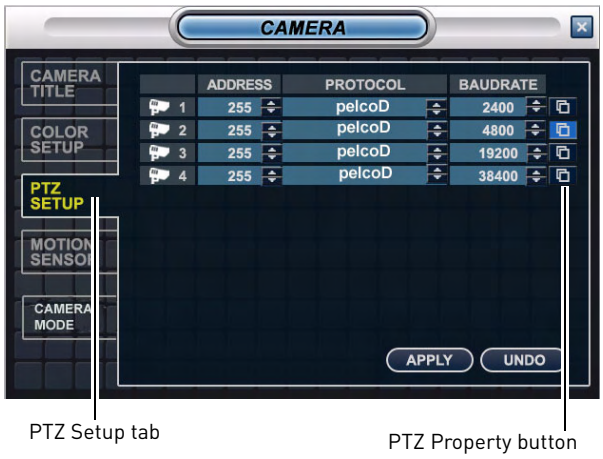


Figure 10.3 PTZ Setup menu.

2. Under ADDRESS, select a channel and click ; select the PTZ address (**1~255**).
3. Under PROTOCOL, select the PTZ protocol using the button.
   - Protocol types**: PelcoD, PelcoP MESA-DOME, D-MAX, Ganz PT ,FastraxII 2, SCC_641, SCC_643a, Spd_3300, Multix, MRX_1000, Panisonic WV-CS850, Panisonic WV-csr-604, PTC-400c, PTC-200, LPT-A100L**
4. Under BAUD RATE, click to select desired baud rate.
   - Baud Rate choices: **9600** (default),**19200, 38400, 57600, 115200, 230400, 1200, 2400** or **4800,**
5. Click to open the PTZ property window.

Figure 10.4 PTZ property window.

6. In the PTZ Property window, click to configure the following PTZ properties:
   - Channel Number
   - Auto Focus
   - Auto Iris
   - P/T (pan / tilt) speed
7. Click **OK** to save your settings.

MOTION SENSOR TAB

Configuring Motion Sensor Sensitivity

Use the Motion Sensor menu to configure motion detection settings for each camera.

To configure motion settings:

1. Click the **MOTION SENSOR** tab on the left.
   - The Motion Sensor tab opens.

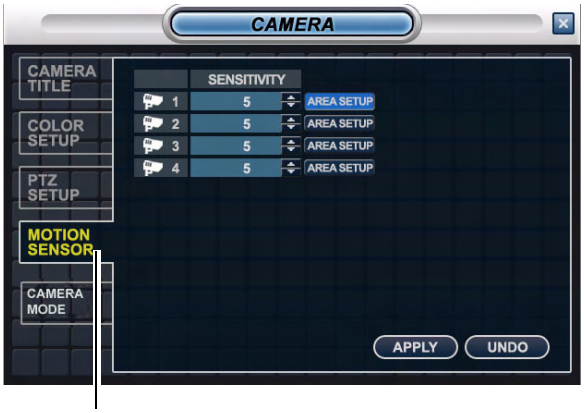


Figure 10.5 Motion Sensor menu

2. Under SENSITIVITY, click to adjust the sensitivity level for the desired channel.
   - The higher the number, the greater the sensitivity.
3. Click the **AREA** button.
   - The Motion Area Grid opens.
4. Drag the mouse cursor to select the area that you want to monitor for motion.

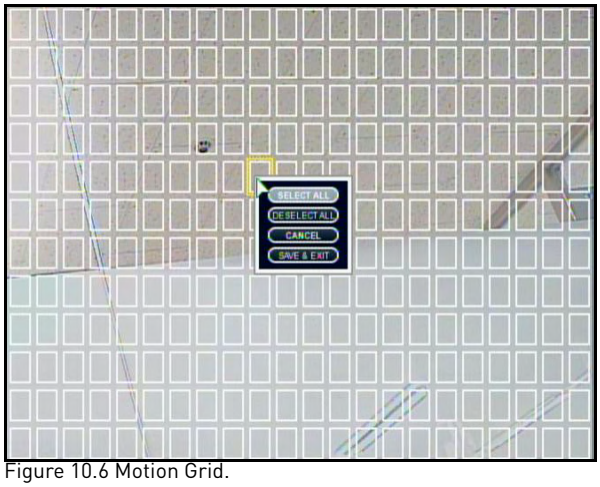


Figure 10.6 Motion Grid.

5. Right-click anywhere on the screen.
   - A grid selection menu opens.

Figure 10.7 Grid selection menu.

6. Click **SAVE & EXIT** to save your changes

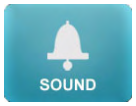
OR

   - Click **SELECT ALL** to select the entire grid and then click **SAVE & EXIT**.
   - Click **DESELECT ALL** to clear the grid and then click **SAVE & EXIT**.
7. Repeat for the remaining channels.

CAMERA MODE TAB

The camera mode tab allows you to enable/ disable Camera Line Lock. Select **ON** or **OFF** to enable or disable camera line lock.

> **NOTE:** Camera Line Lock is an **optional** setting for line-lock cameras. You do not have to enable Camera Line Lock for your camera to view or record.



SOUND

Configure live audio, network audio, and buzzer settings.

NOTE: Audio-capable cameras or self-powered microphones (not included) must be connected to the system in order to use listen-in audio (live audio monitoring).

Use the audio menu to configure live audio and network audio settings.

To open the Sound menu:

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.
2. Click SYSTEM SETUP.
   - The System Setup menu opens.
3. Click **SOUND**.
   - The Sound setup window opens.

Figure 11.0 Audio Menu

NOTE: Network audio will consume more bandwidth and may affect the transmission of the video signal. Enable or disable network audio based on your network settings.

AUDIO TAB

Enabling System Network Audio

1. Beside LIVE AUDIO, click to select **ON** to enable live audio.

   NOTE: You must use audio-capable cameras (not included) for live audio to transmit from the camera to the system.
2. Beside NETWORK AUDIO TX (transmit),click to select **ON** to enable network audio transmission.
3. Beside NETWORK AUDIO RX (receive), select **ON** to enable the system to receive audio from the cameras.
4. Click **APPLY** to save your settings.

BUZZER TAB

Disabling System 'Beeps'

To disable the system 'beeps':

1. Click the **BUZZER** tab on the left.
   - The Buzzer menu opens.

Figure 11.1 Buzzer Menu.

2. Under KEYPAD, click to select **OFF**.
3. Under REMOTE CONTROL, click to select **OFF**.
4. Click **APPLY** to save your settings.

SYSTEM

Configure date and time, system management settings, and control device options.

To open the System menu:

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.
2. Click SYSTEM SETUP.
   - The System Setup menu opens.
3. Click **SYSTEM**.
   - The System setup window opens.

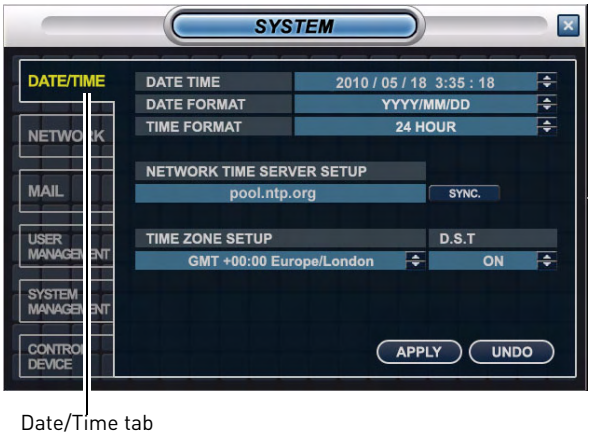


Figure 12.0 System menu.

DATE/TIME TAB

Configuring system Date and Time

By default, once you open the system menu, the DATE/TIME menu opens.

To configure the system date and time:

1. Beside DATE TIME, double-click on the numeric values (Year, month, date).
   - A number window opens.

Figure 12.1 Number window.

2. Enter the desired value and then click **OK** to save your settings.

Configuring system Date format and 24 HR vs 12HR time notation

To configure the system date and time format:

1. Beside DATE FORMAT, click to adjust the date and time format (ie. Year, Month Date VS. Month, Date, Year).
2. Beside TIME FORMAT, click to select 24 hour or 12 hour time notation.
3. Click **APPLY** to save your settings.

Configuring Time Server

A time server allows the system to sync itself with a specified server time. This ensures that your system always has an accurate time.

To change the default time server:

1. Under NETWORK TIME SERVER SETUP, double-click on the field below.
   - A virtual keyboard opens.
2. Enter a new time server address.
3. Click **OK** to save your settings.
4. Click the **SYNC** button.
   - A success message appears.
5. Click **APPLY** to save your settings.

Enabling/Disabling Daylight Savings Time

To enable/disable daylight savings time (DST):

1. Under D.S.T,click to select **ON/OFF** to enable or disable daylight savings time.
2. Click **APPLY** to save your settings.

Adjusting System Time Zone

To manually adjust the system time zone:

1. Under TIME ZONE SETUP,click to adjust the system time zone.
2. Click **APPLY** to save your settings.

NETWORK TAB

To open the Network tab:

1. Click the **NETWORK** tab on the left.
   - The network configuration window opens.

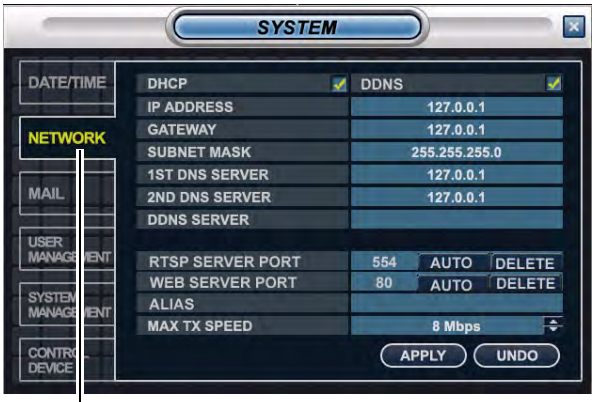


Figure 13.0 System Network tab.

Enabling DDNS & DHCP

You must enable DDNS and and DHCP for remote connectivity.

To enable DDNS & DHCP:

1. Select the **DHCP** or **DDNS** checkbox.
2. Click **APPLY** to save your settings.

Configuring DDNS Settings

After you have set up your DDNS account, you must enter your DDNS address into the system.

Prerequisites: Create a Lorex DDNS account. For details, see "Setting Up DDNS Service" on page 106.

To configure DDNS settings in your system:

1. Double-click the field beside **DDNS SERVER**.

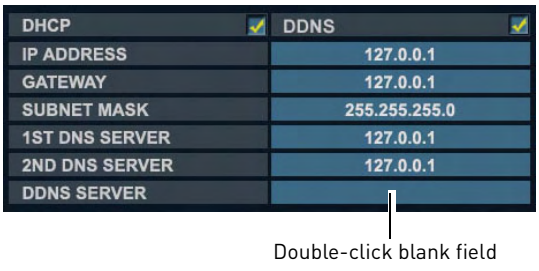


Figure 13.2 Configuring DDNS settings.

   - A DDNS Setup window opens.

Figure 13.3 DDNS Setup window.

2. Beside **DOMAIN NAME**, double-click the blank field.
   - The Virtual Keyboard opens.
3. Enter the name of your DDNS address (i.e. tomsmith).

   NOTE: You do not have to enter the entire domain name in the DOMAIN NAME field. For example, if your DDNS address is tomsmith.lorexddns.net, you only have to enter **tomsmith**.

4. Beside **USER ID**, double-click the blank field.
   - The Virtual Keyboard opens.
5. Enter your **DDNS** login name created during the DDNS account creation process.
6. Click **OK** to save your settings.
7. Beside **PASSWORD**, double-click the blank field.
   - The Virtual Keyboard opens.
8. Enter the **DDNS password** that you created during the DDNS account creation process.
9. Click **OK** to save your settings.

   NOTE: Your DDNS information is sent to your e-mail address when you create a DDNS account. For details, see "Setting Up DDNS Service" on page 106.

After you have entered the required DDNS information, click the **DDNS STATUS** button. A success message appears if DDNS is running properly.

Auto Port Forwarding

The LH600 series DVR features a built in Auto-Port Forwarding function. This allows you to port forward your UPnP router without router configuration.

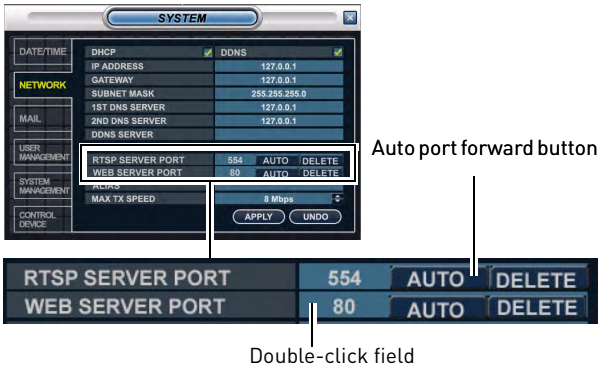


Figure 13.4 Auto port forwarding.

To port forward a port in your router:

1. Beside **RTSP SERVER PORT**, double-click the field.
   - A Number window opens.
2. Enter the desired port number (by default, port **554**).
3. Click **OK** to save your settings
4. Beside RTSP SERVER PORT,click the **AUTO** button.
   - A success message appears.
5. Beside WEB SERVER PORT, double-click the field.
   - A Number window opens.
6. Enter the desired port number (by default, port **80**)
7. Click **OK** to save your settings.
8. Beside WEB SERVER PORT, click the **AUTO** button.
   - A success message appears.

If you do not receive a success message:

- Double check that you have entered the correct system user name, password, and DDNS address (enter your sub-domain name only.)
- Use the Lorex DDNS Auto Port Forwarding Wizard. For details, see "Lorex Auto Port Forwarding Wizard" on page 99.

Configuring System Transmission speed

The system transmission speed determines how fast data transmits from the ethernet port. By default, the system is set to 8 Mbps transmission speed.

To configure the system transmission speed:

1. Beside **MAX TX SPEED**, click to adjust the maximum data transmission speed.
2. Click **APPLY** to save your settings.

MAIL TAB

The Mail tab allows you to configure the system to send e-mail notifications when a system detects motion, or when an alarm event triggers.

- For details, see "Appendix D: Enabling E-Mail Notifications" on page 123.

Prerequisites: Enable e-mail notifications, and enter in an email address into the system in the USER MANAGEMENT tab.

To open the Mail tab:

1. Click the **MAIL** tab on the left.
   - The Mail configuration window opens.

Figure 13.5 Mail tab.

Configuring the E-mail Server

By default, the system uses the Lorex email server to send notification e-mails. Notification e-mails allow the system to send

you a message when an event occurrs (i.e. a motion event).

To use the Lorex e-mail server:

1. Select the checkbox beside **DEFAULT SERVER** (default).

   NOTE: The SERVER, PORT, SECURITY, USER, PASSWORD fields gray-out if DEFAULT is selected.

2. Beside **TEST-EMAIL**, click the **PRESS** button.
   - An email will be sent to your email address entered under the USER MANAGEMENT tab.
3. Click **APPLY** to save your settings.

To configure the e-mail server using custom settings:

1. De-select the check box beside **DEFAULT SERVER**.
   - The SERVER, PORT, SECURITY, USER, PASSWORD fields can now be edited.

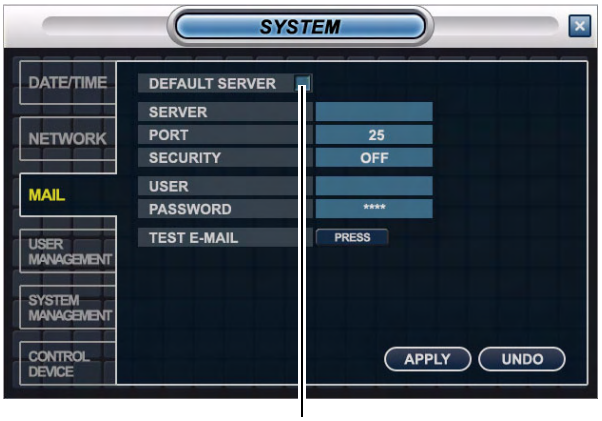


Figure 13.6 Configuring the e-mail server.

Enter your E-mail Server & Port Information

1. Double-click on the blank field beside **SERVER**.
   - The Virtual Keyboard opens.
2. Enter the e-mail server name using the Virtual Keyboard.
3. Click **OK** to save your settings.
4. Double-click the field beside **PORT**.
   - The Number window opens.
5. Enter the port number (specified by the e-mail server).
6. Click **OK** to save your settings.

Enter your E-mail User name and Password

1. Beside **USER**, double-click the blank field.
   - The Virtual Keyboard opens.
2. Enter your e-mail user name.
3. Click **OK** to save your settings.

Test your E-mail Account

Beside **TEST E-MAIL**, click the **PRESS** button to verify that the system can properly connect to your e-mail server.

Configuring Your System To Send Notification E-Mails

To configure your system to send notification e-mails, see "Appendix D: Enabling E-Mail Notifications" on page 123.

USER MANAGEMENT TAB

The user management tab allows you to add, remove and edit users who log in to the system.

To open the User Management tab:

1. Click the **USER MANAGEMENT** tab on the left.
   - The User Management window opens.

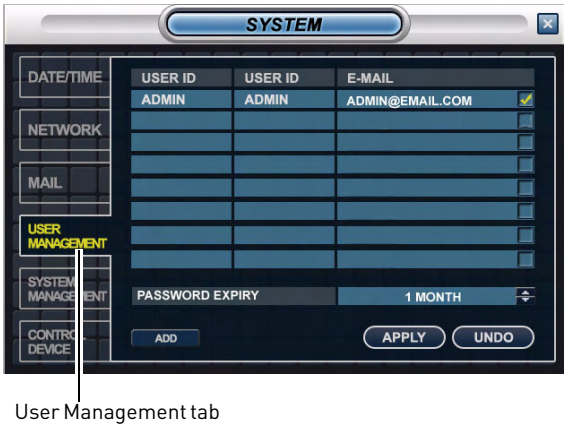


Figure 13.7 User management tab.

Configuring Email Notification Settings

To configure email notification settings:

1. Under USER ID, double-click the user you wish to modify (ADMIN, USER or MANAGER).
   - The Edit window opens.

Figure 13.8 Edit window.

2. Double-click the blank field beside E-MAIL.
   - The Virtual Keyboard opens.
3. Enter the desired email you wish to receive notification emails.
4. Click **OK** to save your settings.
5. Beside E-MAIL NOTIFICATION, click to select **ON**.
6. Click **OK** to save your settings.

NOTE: Ensure the EMAIL checkbox is selected.

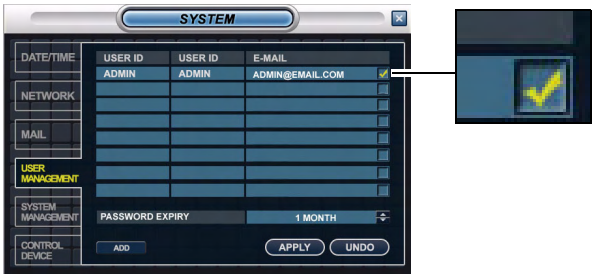


Figure 13.9 Enabling email notifications.

Configuring Password Expiry Duration

You can configure the system to refresh its password list by enabling the Password Expiry feature. This ensures that the system password changes every few months.

To configure the system's Password Expiry Duration:

1. Beside PASSWORD EXPIRY, click to select the duration of when you would like the password to expire.
   - Select from 1 MONTH, 2 MONTHS, 4 MONTHS, 6 MONTHS, 12 MONTHS or OFF.
   - Click **APPLY** to save your settings.

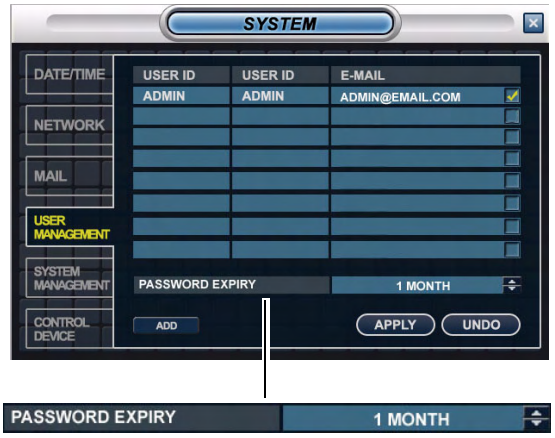


Figure 13.10 Configuring Password Expiry duration.

Adding New Users

To add new users to the system:

1. Click the **ADD** button near the bottom of the window.
   - The Add window opens.

Figure 13.11 Adding new users.

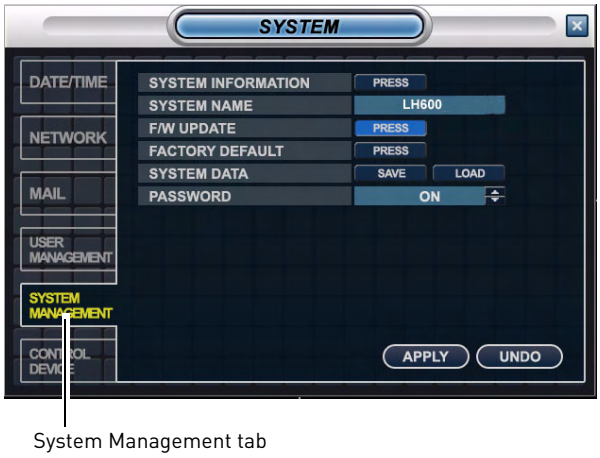
2. Configure the following:
   - **USER ID**: Enter in the desired user name by double-clicking the blank field beside USER ID.
   - **PASSWORD**: Enter in the desired user password by double-clicking the blank field beside PASSWORD.
   - **GROUP ID**: Select the type of user account you wish to create (MANAGER or USER).
   - **E-MAIL**: Enter the e-mail address associated with the account. This will be the e-mail account that receives e-mail notifications.
   - **E-MAIL NOTIFICATION:** Select **ON** to enable e-mail notifications for the account
   - Click **OK** and then click **APPLY** to save your settings.

SYSTEM MANAGEMENT TAB

The System Management tab allows you to upgrade the system firmware, restore system factory defaults, and view vital system information.

To open the System Management tab:

1. Click the **SYSTEM MANAGEMENT** tab on the left.
   - The System Management window opens.



System Management tab

Figure 13.12 System Management window

Viewing System Information

- To view system information, click the **PRESS** button beside SYSTEM INFORMATION.

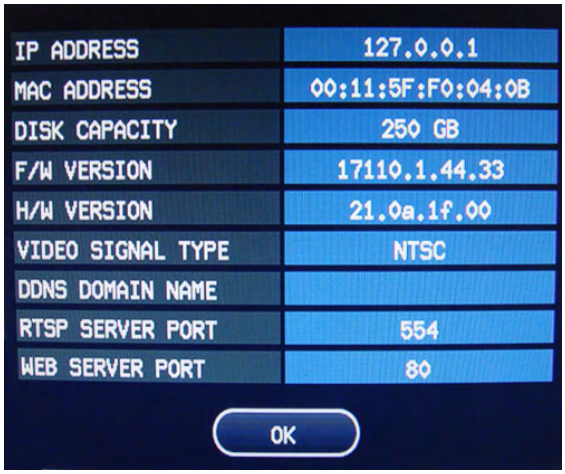


Figure 13.13 System Information window.

Changing The System Name

- To change the system name, double-click the field beside SYSTEM NAME. Use the Virtual Keyboard to enter the desired system name (up to 15 characters).

Upgrading The System Firmware

Firmware updates enhance system stability and performance.

Prerequisites:

Download the latest firmware from www.lorextechnology.com and then **extract** the file onto your USB flash drive.

To update the system firmware:

1. Insert the USB flash drive with the latest firmware into the USB port of the system.
2. Beside F/W UPDATE, click the **PRESS** button.
   - A Login window opens.
3. Enter your user name and password and then click **OK**.
   - A firmware file browser window opens.

4. Click the **GET F/W** button.
   - The system searches for the firmware files on your USB device.

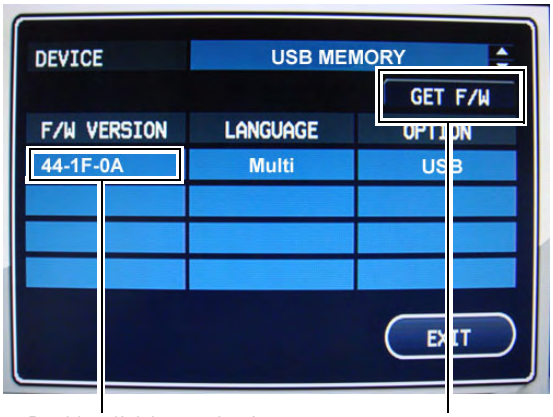


Figure 14.0 Firmware upgrade window.

5. Under F/W VERSION, double-click the name of the firmware file.
   - A firmware confirmation window opens.

Figure 14.1 Firmware upgrade confirmation window.

6. Click **YES** to upgrade the system firmware.
   - When the firmware upgrade completes, a success message window opens.

Figure 14.2 Firmware success window.

7. Click **OK** to restart your system.

Restoring System Defaults

To restore the system back to the factory default configuration:

1. Beside FACTORY DEFAULT, click the **PRESS** button.
   - A Login window opens.
2. Enter your user name and password and then click **OK**.
   - A warning window opens.

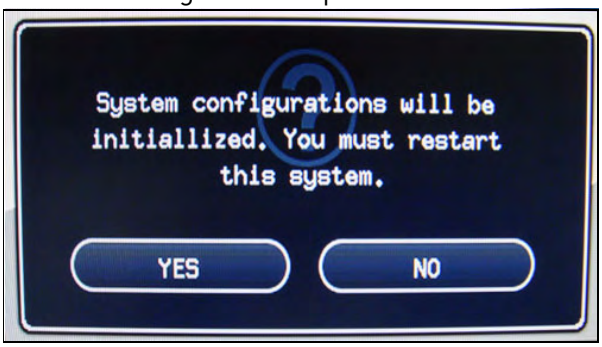


Figure 14.3 System factory default prompt.

3. Click **YES** to restore factory defaults.
   - A Format Disk window opens.

Figure 14.4 Format disk prompt.

4. Click **YES** to format the hard drive or click **NO** to continue without formatting the hard drive.
   - The system restarts itself and loads with the factory settings.

NOTE: Formatting the hard drive erases all videos from the system.

Saving and Loading System Settings

You can save your system settings and re-load the system settings when required (i.e. after reformatting your system).

Saving System Settings

Prerequisites:

- Format a USB flash drive and insert the USB flash drive into the USB port of the system.

To save your system settings:

1. Beside SYSTEM DATA, click the **SAVE** button.
   - A success window opens when the system settings save onto the USB flash drive.

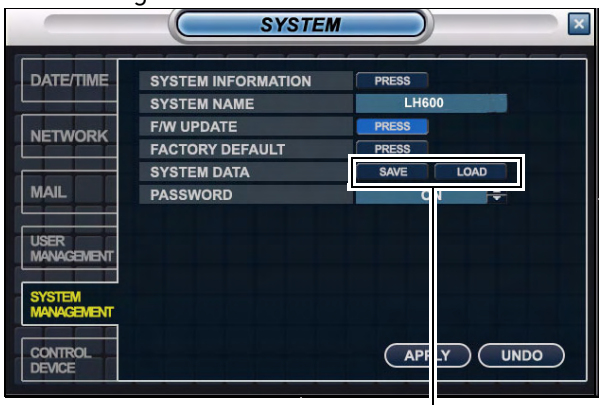


Figure 14.5 Saving system settings.

2. Click **OK** to exit.

Loading System Settings

Prerequisites:

- Save your system settings onto a USB flash drive, and insert the USB flash drive into the USB port of the system.

To load your system settings:

1. Click the **LOAD** button.
   - A Login window opens.
2. Enter your user name and password and then click **OK**.
   - A success window opens.
3. Click **OK** to restart the system.

Enabling and Disabling The System Password

To enable or disable the system password:

1. Beside the PASSWORD field, click to select **ON** or **OFF**.
2. Click **APPLY** to save your settings.

Figure 14.6 Enabling / disabling the system password.

3. Enter your name and password when the Login window opens.
4. Click **OK** to save your settings.

CONTROL DEVICE TAB

The Control Device tab allows you to configure PTZ (Pan Tilt Zoom) cameras (sold separately) on your system. Refer to the PTZ camera's manual for the proper settings.

For details on connecting your PTZ camera into the system, see "Appendix F: Connecting PTZ Cameras" on page 128.

To configure the PTZ protocols:

1. Click the CONTROL DEVICE tab on the left.
   - The Control Device window opens.

Figure 14.7 Control Device window.

2. Configure the following:
   - SYSTEM ID: Select the desired system ID (**1~254**).
   - PROTOCOL: Select the protocol used by the PTZ camera (**D-MAX, ZCA-SC201, MESA-KB, ICK-3000**).
   - BAUDRATE: Select the baudrate of the PTZ camera (**1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400**)
3. Click **APPLY** to save your settings.

EVENT/SENSOR

The EVENT/SENSOR tab allows you to configure how the system interprets devices connected to the Alarm block on the rear panel of the system. Configure HDD events, alarm input/output, buzzer, and email notifications.

To open the System menu:

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.
2. Click SYSTEM SETUP.
   - The System Setup menu opens.
3. Click **EVENT/SENSOR**.
   - The Event/Sensor window opens.

Figure 15.0 Event / Sensor window.

HDD EVENT

Use the HDD Event menu to allow the system to monitor the internal hard disk. If the system detects a hard drive error, an email is sent to your email address (email notification must be configured).

To set HDD event alarms:

1. Beside **DISK FULL EVENT**, click to select **ON** or **OFF** to enable or disable the system from reporting that the hard drive is full.

ALARM INPUT

Use the Alarm Input menu to configure alarm input types (i.e. motion sensors, not included).

To open the Alarm Input menu:

1. Click the ALARM INPUT tab on the left.
   - The Alarm Input window opens.

Figure 15.1 Alarm Input menu (4-channel model shown).

NOTE: Make sure you have properly connected an external alarm device to the alarm block on the rear panel of the system prior to configure alarm settings. For more details, see "Appendix H: Connecting Motion / Alarm Devices" on page 131.

To configure alarm inputs:

1. Under OPERATION, click to select **ENABLE**.
2. Under TYPE, click to select **N/O** (normally open) or **N/C** (normally closed).
3. Repeat for the remaining channels.
4. Click **APPLY** to save your settings.

NOTE: Refer to your alarm input device's instructions on how to set the alarm type (i.e. N/O or N/C).

ALARM OUTPUT

Use the Alarm Output menu to configure behavior and action settings for an external alarm output (i.e a strobe light, not included) device connected to the alarm block of the system. For example, when an alarm triggers, the strobe light begins to flash.

To open the Alarm Output Menu:

1. Click the **ALARM OUTPUT** tab on the left.
   - The Alarm Output window opens.

Figure 15.2 Alarm Output menu.

Behavior Settings

To configure behavior settings:

1. Under OPERATION, click to select **ENABLE**.

   NOTE: You must select **ENABLE** in order to configure the Action settings.

2. Configure the following settings:
   - MODE: Select **TRANSPARENT** or **LATCHED**.

     NOTE: "Transparent" indicates the output is active only when the trigger criteria (ie. movement) is present. "Latched" indicates the output is active for a set period of time after a trigger.

   - DURATION: Latched mode must be selected to configure the duration setting. Duration refers to the time the alarm continues to activate after an alarm triggers.

     Click to select 5 SEC (default), 10 SEC, 15 SEC, 20 SEC, 30 SEC, 40 SEC, 60 SEC, 120 SEC, 180 SEC, 300 SEC, or Until Key (until a key is pressed on the system).

     NOTE: In Latched mode, "Duration" refers to the time that the alarm output remains active after it has been triggered.

   - HDD EVENT: Select **ON** or **OFF** to enable/disable the system from reporting hard drive errors.

Action Settings

Select the type of events you want each channel to trigger. For example, you may only want Video Loss events to trigger an alarm.

To configure action settings:

1. Set the following:
   - **ALARM**: Select the box to enable the alarm output when an alarm input is triggered
   - **VIDEO LOSS**: Select the box to enable the alarm output when video loss occurs on the system (i.e. if the video cable from the camera is disconnected from the system).
   - **MOTION**: Select the box to enable the alarm output when motion is detected on the system
2. Click **APPLY** to save your settings.

BUZZER OUT

Use the Buzzer Out menu to configure behavior and actions for sirens or speakers connected to the system (not included). When an alarm triggers, the siren/speaker will sound.

To open the Buzzer Out menu:

1. Click the **BUZZER OUTPUT** tab on the left.
   - The Buzzer Output window opens.

Figure 15.3 E-mail Notification window.

Behavior Settings

To configure behavior settings:

1. Under OPERATION, select **ENABLE**.
2. Under HDD EVENT, select **ON/OFF**. If ON, an HDD event will trigger an alarm output.
3. Under MODE, select **TRANSPARENT** or **LATCHED**.

   NOTE: "Transparent" indicates the output is active only when the trigger criteria is present. "Latched" indicates the output is active for a set period of time after a trigger.

4. Under DURATION, select **5 SEC** (default), **10 SEC**, **15 SEC**, **20 SEC**, **30 SEC**, **40 SEC**, **60 SEC**, **120 SEC**, **180 SEC**, **300 SEC**, or **Until Key** (until a key is pressed on the system).

   NOTE: In Latched mode, "Duration" refers to the time that the alarm output remains active after it has been triggered.

Action Settings

Set event triggers for each channel.

To configure action settings:

1. Set the following:
   - **ALARM**: Select the box to enable the alarm output when an alarm input is triggered
   - **VIDEO LOSS**: Select the box to enable the alarm output when video loss occurs on the system
   - **MOTION**: Select the box to enable the alarm output when motion is detected on the system
2. Click **APPLY** to save your settings.

E-MAIL NOTIFICATION

Use the Email Notification menu to send notification emails when an event occurrs. For example, if the system detects a motion event, the system can send out an e-mail to notify you.

For details on how to set up e-mail notification, see "Appendix D: Enabling E-Mail Notifications" on page 123.

To open the E-Mail Notification menu:

1. Click the **E-MAIL NOTIFICATION** tab on the left.
   - The E-mail Notification window opens.

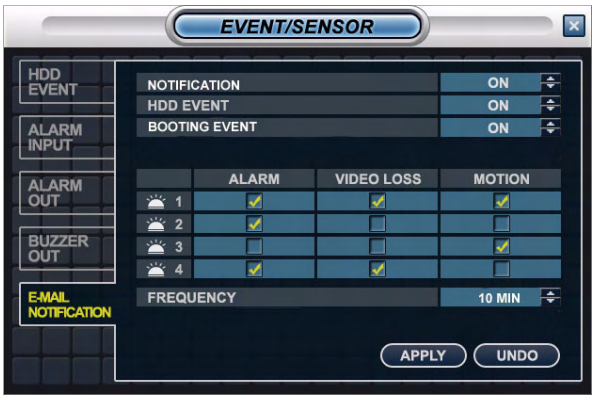


Figure 15.4 E-Mail Notification window.

Behavior Settings

To configure behavior settings:

1. Under NOTIFICATION, select **ON**. If ON, the system will send an email notification to selected users.

   NOTE: You must select **ON** in order to configure action settings.

2. Under BOOTING EVENT, select **ON/OFF**. If ON, the system will send an email notification when the system restarts (powers on/off).
3. Under HDD EVENT, select **ON/OFF**. If ON, the system will send an email notification when an error occurrs in the internal HDD.

Action Settings

Set event triggers for each channel.

To configure action settings:

1. Set the following:
   - **ALARM**: Select the box to enable e-mail notifications when an alarm input is triggered
   - **VIDEO LOSS**: Select the box to enable e-mail notifications when video loss occurs on the system
   - **MOTION**: Select the box to enable e-mail notifications when motion is detected on the system
2. Under FREQUENCY, select the time interval that the system sends email notifications.
3. Click **APPLY** to save your settings.

DISK MANAGE

Configure settings for the internal hard drive.

To open the Disk Manage menu:

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.
2. Click SYSTEM SETUP.
   - The System Setup menu opens.
3. Click **DISK MANAGEMENT**.
   - The Disk Management window opens.

Figure 15.5 Disk management menu.

Configure the following:

- RECORD TIME LIMIT: Select **12 HOUR**, **1 DAY**, **2 DAY**, **3 DAY**, **1 WEEK**, **1 MONTH** or **OFF**.

  NOTE: Record Time Limit refers to the length of time data will be kept on the HDD. For example: if the Record Time Limit is set for 1 week, the system records data from the 1st of the month through the 7th of the month. On the 8th of the month, it will begin overwriting data (hour by hour) that occurred on the 1st of the month. On the 9th of the month, it will begin overwriting data that occurred on the 2nd of the month.

- DELETE DATA: Deletes the data once the hard drive reaches the record time limit (i.e. 1 week, 1 month)RECORD TIME LIMIT must be ON for this function to work. The system deletes the oldest data (first in, first out).

- DISK INFORMATION: Click the **START** button beside DISK INFORMATION to view the make and storage size of your hard drive.
- OVERWRITE: Select **ON/OFF**. If ON, the system will overwite the earliest recorded video data once the HDD(s) is full.

ATTENTION: The OVERWRITE feature must be ON for the Record Time Limit feature to function.

4. Click **APPLY** to save your settings.

FORMATTING THE HDD

It may be necessary to format the hard disk(s), such as when installing a new HDD(s).

ATTENTION: Formatting erases ALL video data on the HDD. This step cannot be undone.

To format the hard drive:

1. Click the **START** button beside the FORMAT field.
   - The Login window opens.
2. Enter in your user name and password and then click **OK**.
   - A warning window opens.

Figure 15.6 Format Disk prompt.

3. Click **YES** to format your hard drive.
   - Wait for the system to erase the hard drive. The system restarts automatically once the formatting process completes.

USING WEB REMOTE VIEWER

To access Web Remote Viewer, you must be connected to the internet, or the Local Area Network.

Connecting to Web Remote Viewer Locally

- To log in to Web Remote Viewer from a local network , enter **http://**, then your DVR's IP address, followed by a **semi-colon**, followed by the **Web Server Port #** into Internet Explorer. For example, enter http:// 92.168.2.1**:**2000 into Internet Explorer. 192.168.2.1 is the local IP address of the DVR. 2000 is the Web Server Port number. The DVR and computer must connect to the same router for this method to work.
- Press the **F1** button on your remote to view the DVR's network information.
- **OR**, right-click to open the quick menu, then click on **SYSTEM→SYSTEM MANAGEMENT**. Beside SYSTEM INFORMATION, click the **PRESS** button.

Connecting to Web Remote Viewer using DDNS

Register for a DDNS address, and enable DDNS on your DVR to access your system remotely. By registering for a DDNS address, you can access your system from any computer with a web browser. Connecting to Web Remote Viewer using DDNS also allows you to monitor your system from your iPhone™ or Blackberry™ mobile device.

Step 1: Port Forward

- Use the AUTOPORT feature on the system to auto port forward ports **80 & 554** (default ports) to your router. For details, see "Auto Port Forwarding" on page 46.

OR

- Use the Lorex Auto Port Forwarding Wizard (included on CD) to port forward ports 80 & 554 to your router. For details, see "Lorex Auto Port Forwarding Wizard" on page 99.

Step 2: Register for DDNS

To register for a Lorex DDNS account, see "Setting Up DDNS Service" on page 106.

Step 3: Enable DDNS on your system

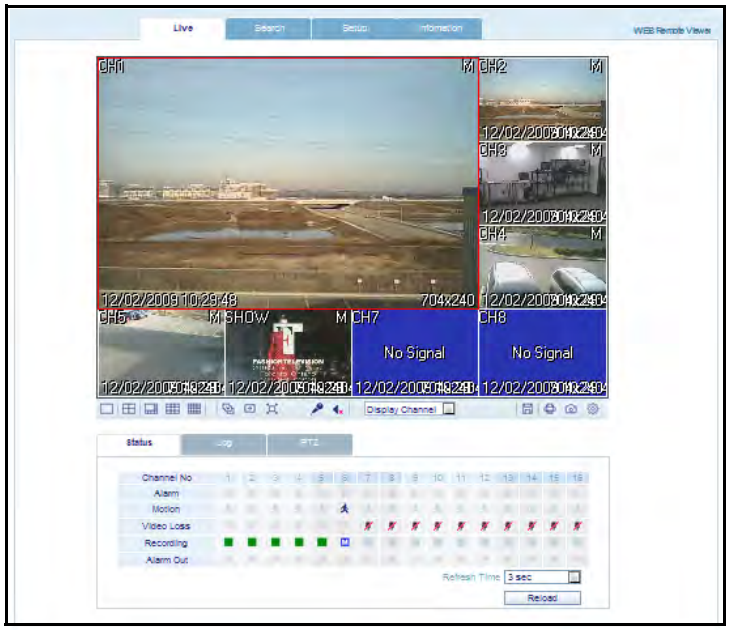
To enable DDNS on your system, see "Network Tab" on page 45.

Step 4: Connect

Enter the DDNS address of your system into your computer or mobile device's web browser.

WEB REMOTE VIEWER

Web Remote Viewer is a remote surveillance software built into your DVR that allows for live viewing and playback. Web Remote Viewer does not need additional software to be installed on your system. Everything is accessed remotely.



System Requirements

Before using Web Remote Viewer, ensure your system meets or exceeds the following system requirements:

Description	Requirement
CPU	2.4 GHz Pentium® 4 or above
Operating System	Windows XP/Vista/7 Mac OSX 10.4 or greater
Browser	Internet Explorer 7 or greater/ Safari
Memory	1 GB RAM (more than 1 GB recommended)
Video	16 MB of video memory
HDD	2 GB of free space
Network (LAN)	10/100 Base-T Network
Network (WAN)	384 Kbps upstream. High speed internet connection required for live video/audio streaming.

Logging into Web Remote Viewer

To log into Web Remote Viewer on your web browser:

1. Open Internet Explorer, and type in the DDNS address you registered with the LH600. A login window appears.
2. **Enter in your DVR's user ID and password**. The Web Remote Viewer window opens.

ATM - Internet Explorer provided by Dell
http://dhu600linux.digimerge.net/html/trustsite.htm
ATM
This website wants to install the following add-on: 'regtrustsite Control' from 'Digimerge Technologies
ActiveX tool bar

Figure 16.0 Web Remote Viewer window prompting for an Active X install.

3. Click the Active X menu bar near the top of the browser. Click **Install ActiveX Control**.

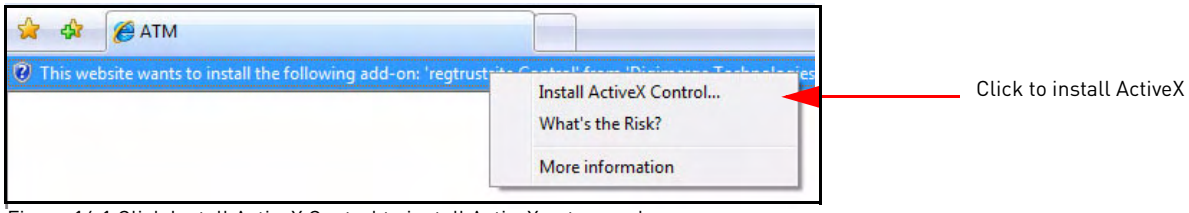


Figure 16.1 Click Install ActiveX Control to install ActiveX onto your browswer.

4. Click **Install** when the security window opens.

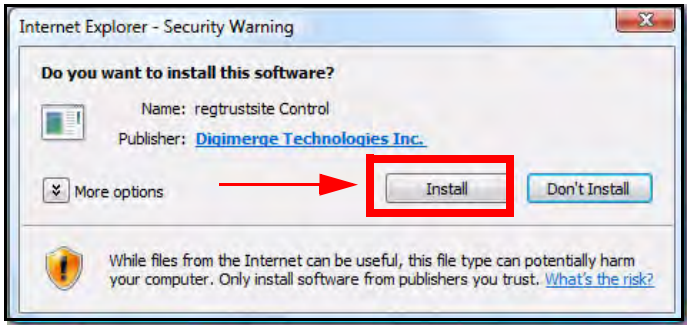

Internet Explorer - Security Warning
Do you want to install this software?
Name: regtrustsite Control
Publisher: Digimerge Technologies Inc.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

Figure 16.2 Internet Explorer Security Warning window. Click Install to continue.

5. Click the ActiveX toolbar when the main Web Remote Viewer window opens. Click **Install ActiveX Control**.

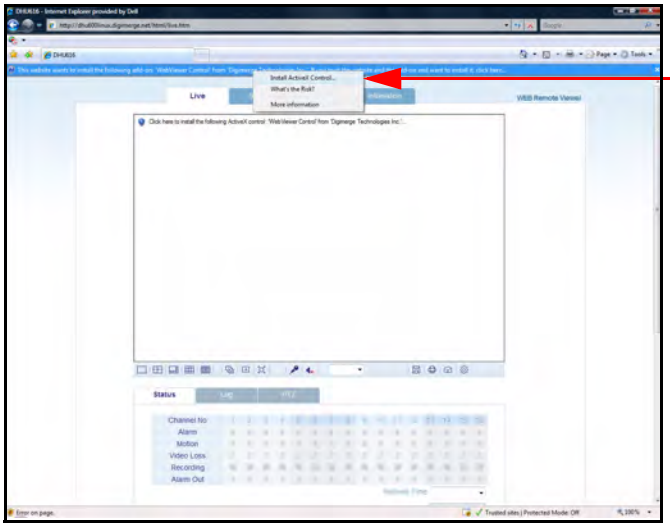


Figure 16.3 An ActiveX tool bar opens again upon initial log in. Install ActiveX to continue.

6. Click **Install** when the security window opens.

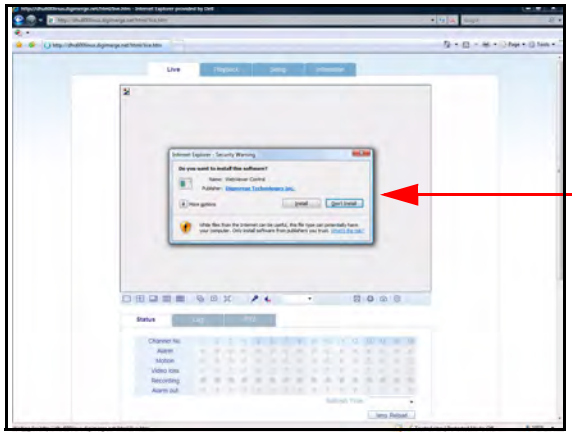


Figure 16.4 Security Warning window.

- The Web Remote Viewer automatically detects and connects to your DVR after the ActiveX plug-in installs.

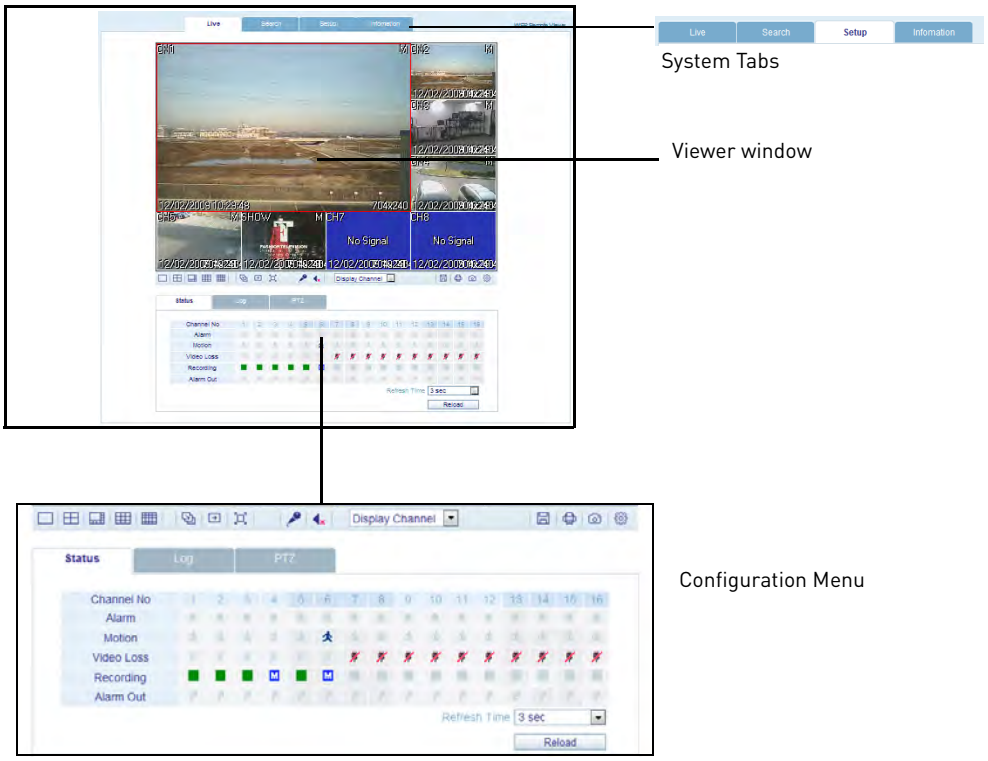


Figure 16.5 Web Remote Viewer basic layout.

The System Tabs

The System tabs near the top of the screen has four tabs: Live, Search, Setup, Information. Click the tab to access its features.

Figure 31.6 System Tabs.

- **Live** tab: View live, streaming video from your DVR
- **Search** tab: Search recorded events from your DVR
- **Setup** tab: Configure camera, recording, and Web Remote Viewer settings
- **Information** tab: Displays Web Remote Viewer version

Using The Navigation Bar

The Navigation Bar allows you to view videos in several split screen modes, save videos, take snapshots of video, and print images of video.

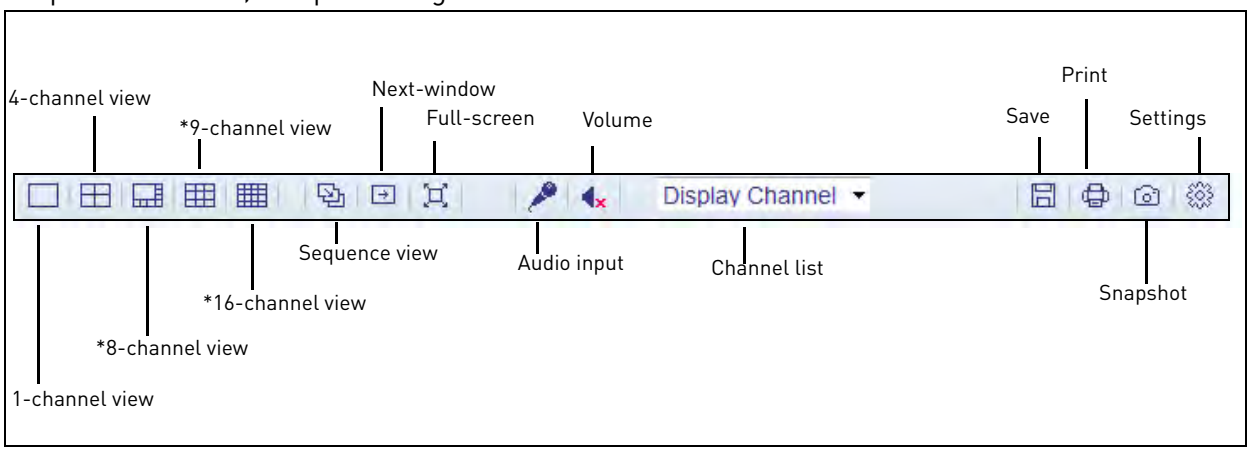


Figure 17.0 Navigation Bar (16-channel model shown). *16-channel model only.

Viewing Modes

- **1-channel view**: Displays one channel of video.
- **4-channel view**: Displays four channels of video
- ***8-channel view**: Displays one main channel, with seven smaller channels
- ***9-channel view**: Displays nine-channels in a grid
- ***16-channel view**: Displays sixteen-channels in a grid
- **Sequence view**: View channels in a sequence
- **Next-window**: View next channel of video
- **Full-screen**: View video in full screen

*16-channel models only

Audio Modes

- **Audio input**: Toggle on/off incoming audio
- **Volume**: Mute/Unmute volume

Basic Settings

- **Save**: Saves streaming video onto your computer.
- **Print**: Print the current screenshot of the channel
- **Settings**: Configure video, audio, and save directory settings

The Live Tab

The Live tab allows you to view live, streaming video from your DVR.

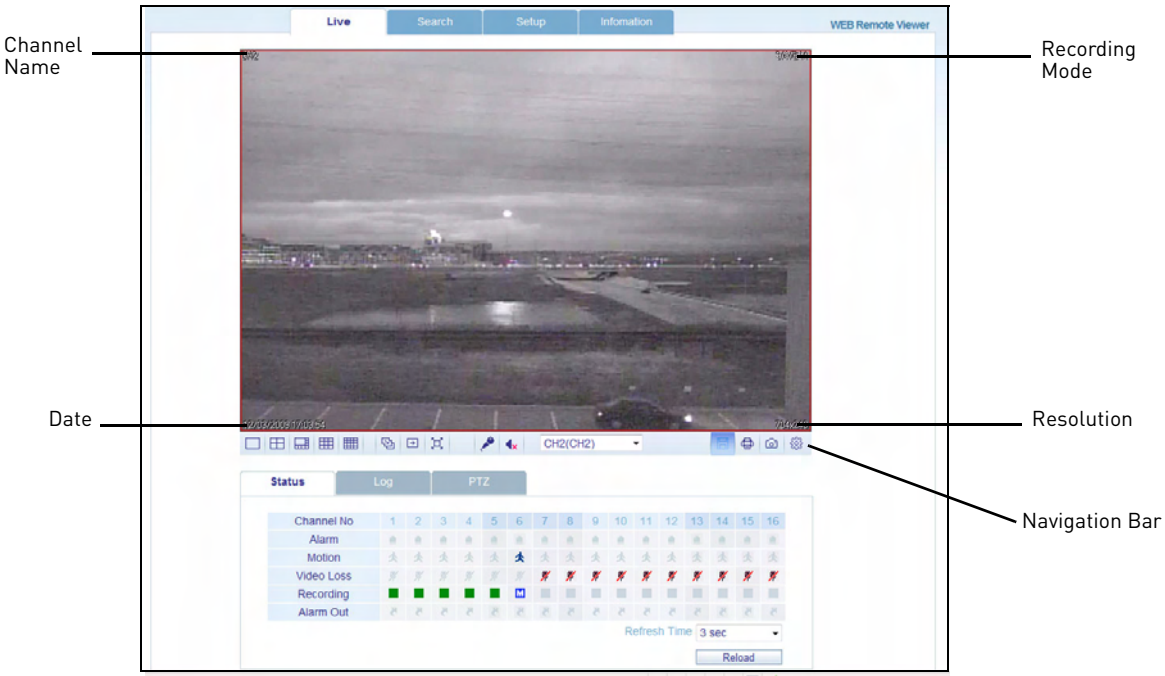


Figure 18.0 Live Tab, main view in single channel mode (16-channel model shown).

Viewing Video In Different Modes

To view video in different modes:

- Click the buttons in the Navigation Bar to view video in 1-channel, 4-channel, 8-channel (8 or 16 channel models only) , 9-channel and 16-channel (16 channel model only) modes.
- Click to view the next channel.
- Click to view video in full screen mode.

Viewing Channels In A Sequence

You can view channels on a rotation by using the Sequence feature. For example, you may want to view channels 1 through 9 in full screen, and have them change channels every 3 seconds.

To view video in a sequence:

- Click the button in the Navigation Bar.

Enabling Audio During Viewing

You must have a microphone installed onto your system before you can hear audio during remote viewing.

To enable the audio source while viewing:

- Click the to enable audio. Click again to disable audio

Syncing Video Audio

It is recommended to synchornize audio with the video (if audio is available). It is recommended to have this setting ON when saving video files. Syncing audio with video ensures that there is no delay between the video and audio.

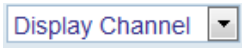
To sync audio with video:

1. Click in the Navigation Bar. The Setup window opens.
2. Under Audio, select **Sync**.
3. Click the **Live CH** drop-down menu, and select the desired audio channel (CH 1~4).
4. Click **Save**.

Muting Audio

- To mute audio, press .
  The speaker icon displays a red X to indicate muted audio:

Switching Channels

- To switch channels, click the  drop-down menu in the Navigation Bar, and select desired channel (Channels 1~16).

Choosing a Save Directory

To select your DVR's save directory:

1. Click in the Navigation Bar. The Setup window opens.

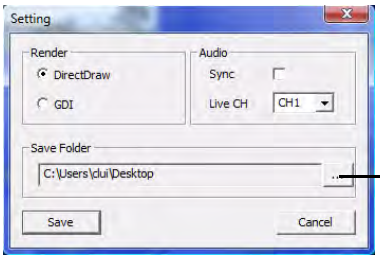


Figure 18.1 Settings Window.

2. Click ... to open a directory tree, and select the desired save location.

Saving Video Clips

You can save a video clip of streaming video and audio from any channel. Video clips save into the save directory you specify.

To save video from a channel:

1. Click on the channel you wish to record. The channel outlines in red.
2. Click to begin saving the video. Click again to stop recording.

Printing An Image Of A Channel

To print an image of a channel:

1. Click in the Navigation Bar. The Print window opens.
2. Select desired print settings, and press **OK** to print.

Changing Hardware Video Acceleration Type

If your computer has problems processing the streaming video, you can try changing the video acceleration.

To change video acceleration type:

1. Click . The Settings window opens.

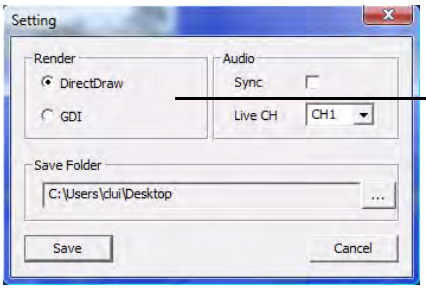


Figure 18.2 Settings Window.

2. Select **GDI** and then press **Save**.

Monitoring Your Cameras

You can monitor all your cameras at a glance by using the Status tab (Figure 33.3).

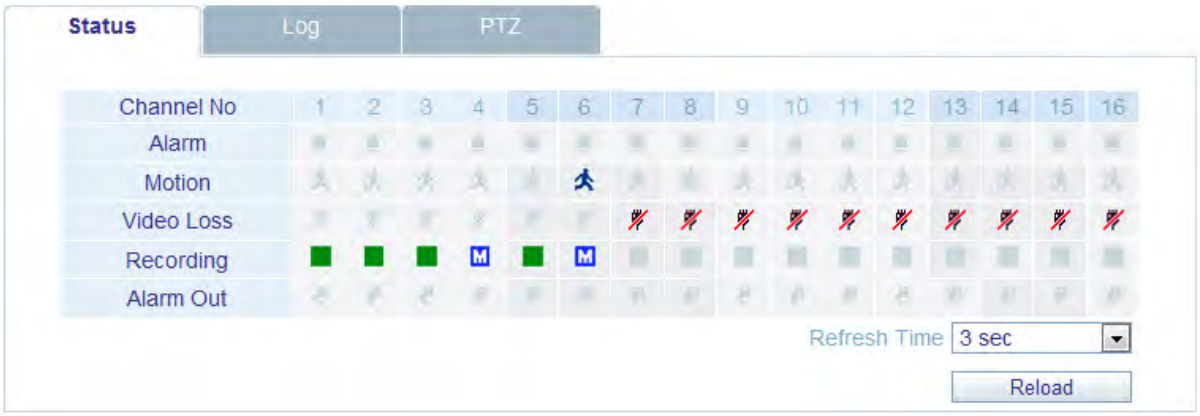


Figure 18.3 Monitor your cameras using the Status tab. (16-channel model shown).

The Status tab allows you to have a "bird's eye view" of all the connected cameras.

For example, in figure 33.3, motion was detected in Channel 6, indicated by the icon. If you click , you will jump to Channel 6. This allows you to quickly and easily view a channel with activity.

Legend

- Pre-alarm recording (green square)
- Motion Detected
- No Camera Connected
- **M** - Motion Recording
- **C** - Continuous Recording
- **A** - Alarm Recording
- **P** - Panic Recording

Increasing and Reducing Video Refresh Rates

You can increase and reduce how often the video feed images refresh. Reducing the refresh time improves video fluidity. Increasing refresh times reduces video fluidity.

If you have a fast internet connection, it is recommended to set the refresh time to the lowest possible setting (3 second refresh rate). This allows you to view video with more movement.

If you have a slow internet connection, it is recommended to set the refresh rate to higher settings (6~10 second refresh rate) to reduce bandwidth consumption.

To change image refresh rates:

- Click the Refresh Time drop-down menu, select desired refresh rate, and then press **Reload** (Figure 33.4).

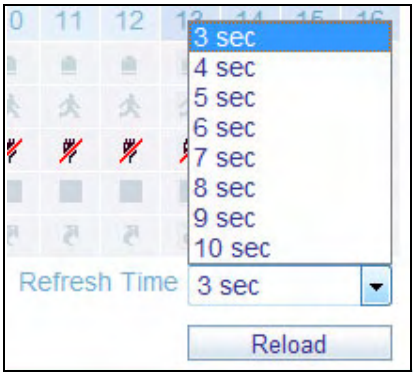


Figure 18.4 Refresh Time drop-down menu

Viewing An Event Log

Viewing an Event Log allows you to view a list of events that happened. For example, you may want to see if there were any system changes during the weekend.

To view an event log:

- Click the **Log tab** and press the **Page Down** and **Page Up** buttons to scroll through the log.

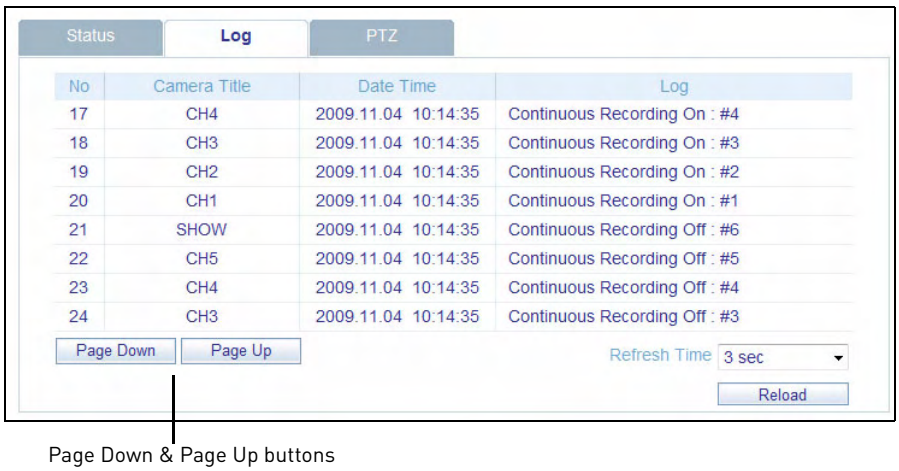

Status
Log
PTZ
No
Camera Title
Date Time
Log
17 CH4 2009.11.04 10:14:35 Continuous Recording On : #4
18 CH3 2009.11.04 10:14:35 Continuous Recording On : #3
19 CH2 2009.11.04 10:14:35 Continuous Recording On : #2
20 CH1 2009.11.04 10:14:35 Continuous Recording On : #1
21 SHOW 2009.11.04 10:14:35 Continuous Recording Off : #6
22 CH5 2009.11.04 10:14:35 Continuous Recording Off : #5
23 CH4 2009.11.04 10:14:35 Continuous Recording Off : #4
24 CH3 2009.11.04 10:14:35 Continuous Recording Off : #3
Page Down
Page Up
Refresh Time
3 sec
Reload
Page Down & Page Up buttons

Figure 18.5 View events in a list by using the Log tab.

Configuring PTZ Settings

You can configure your PTZ (Pant, Tilt, Zoom) camera remotely.

To configure your PTZ camera:

1. Click the PTZ tab to open the configuration window (Figure 34.0).

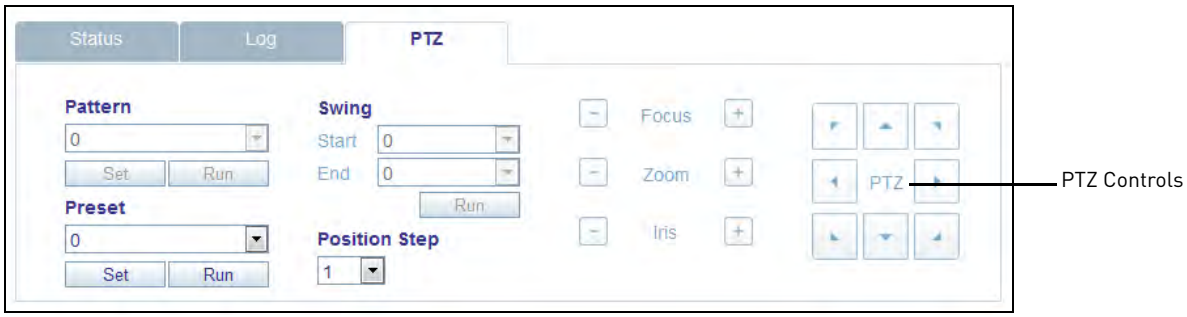


Figure 18.6 PTZ tab.

- **Pattern** and **Swing** are grayed out because they must be configured through the PTZ camera.
- Use the PTZ controls to manipulate camera movement.
- Refer to your PTZ owner's manual for configuration information.

NOTE: PTZ cameras require independant configuration, and cannot be configured through the DVR.

The Search Tab

The Search tab allows you to search video events on your DVR.

Searching For A Video By Time

You can narrow your searches by searching for events by time.

To search for events by time:

1. Click the **Search** tab near the top of the window. The Search window opens.

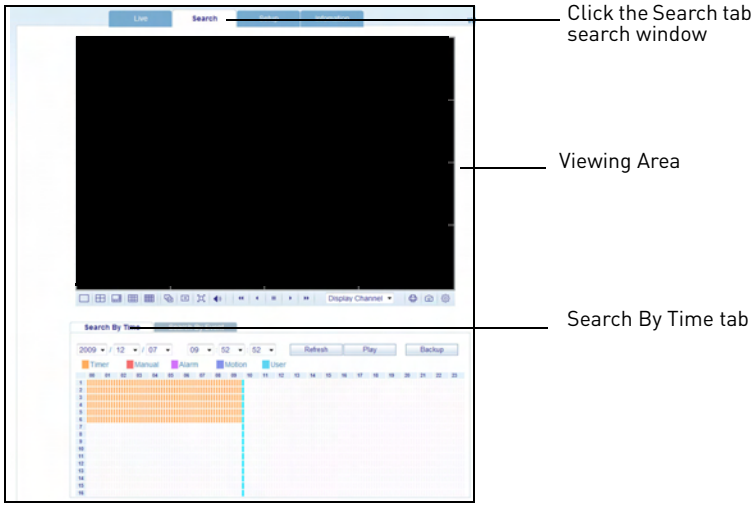


Figure 19.0 Search tab (16-channel model shown).

2. Click the **Search By Time** tab (default).

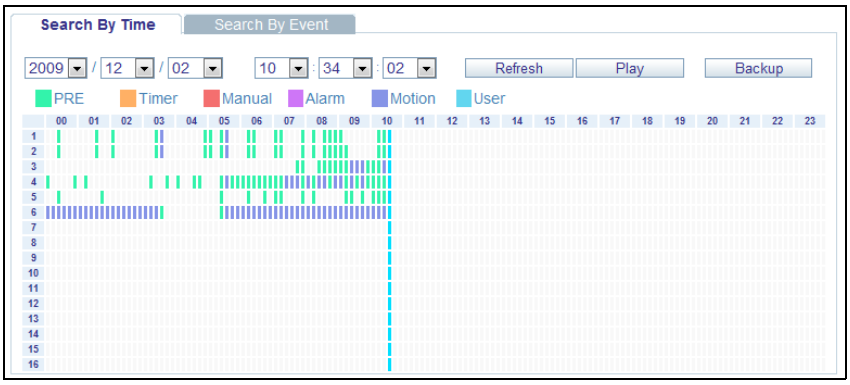


Figure 19.1 Search By Time tab (16-channel model shown).

3. Click the drop-down menus and select the year, month, date and time of the event you wish to search for. Click **Play** to start video viewing.

Figure 19.2 Click the drop-down menus to select the time and date of the event.

4. Drag the vertical, blue bar left or right to scan through the video time frame.

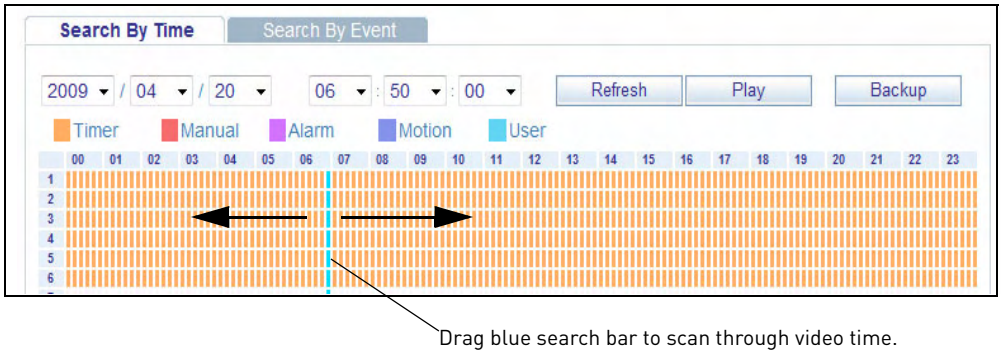


Figure 19.3 Searching video by time.

5. Use the video playback toolbar underneath the video window to control video playback, and viewing modes.

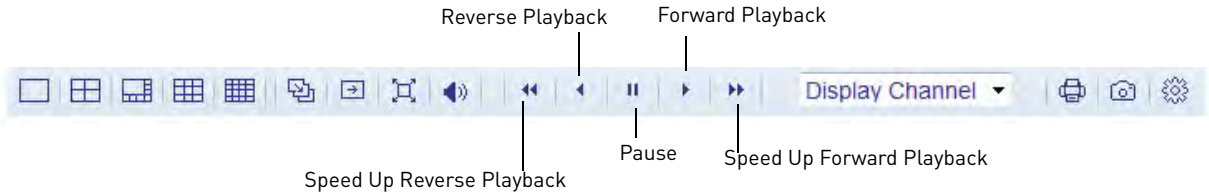


Figure 19.4 Video playback toolbar (16-channel model shown).

- To increase reverse playback or forforwardward playback speed, click or repeatedly to increase the playback speed.
- Reverse playback speeds are: -1x, -2x, -4x, -8x, - 16x, -32x, -64x.
- Forward playback speeds are: 1x, 2x, 4x, 8x, 16x, 32x, 64x.

Searching For A Video By Event

You can search for videos by event. This allows you to narrow your searches with specific criteria.

To search for a video by event:

1. Click the **Search By Event** Tab.

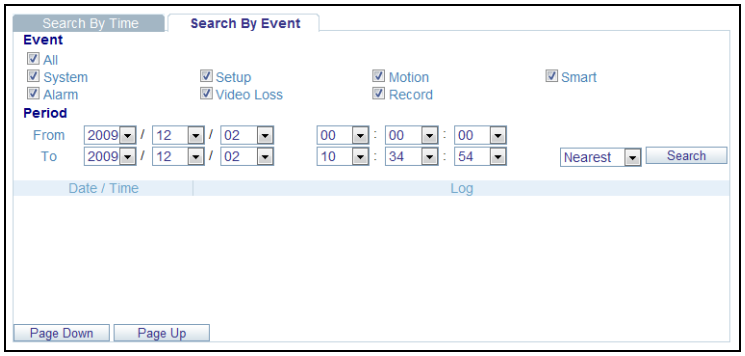


Figure 19.5 Search By Event tab.

2. Under **Event**, select/de-select the criteria you want to search your video with.
3. Under **Period**, select the year, time, and date range you wish wish to search your video with.
4. Beside Search button, click the drop-down menu, and select whether you want to search the video Nearest or Farthest to the event.

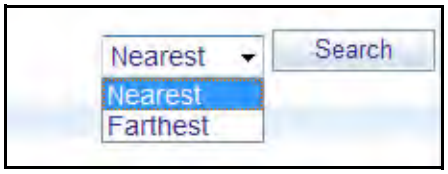


Figure 19.6 Click the drop-down menu to search the event nearest, or farthest date and time to the video event.

5. Click **Search** to populate the search list (Figure 34.6).

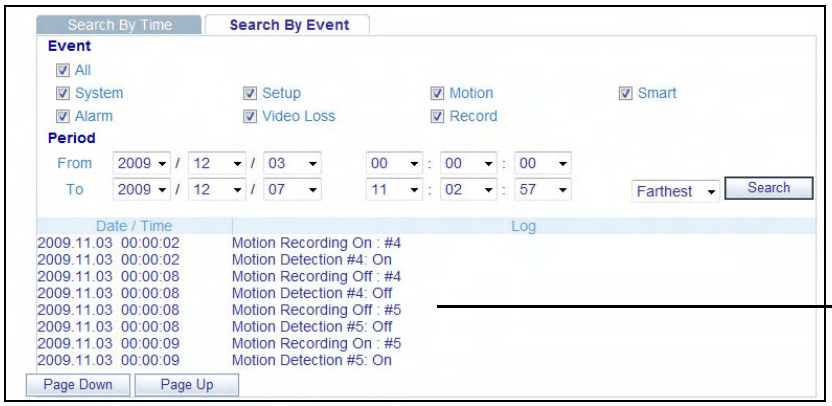


Figure 19.7 Search By Event tab with a populated search result list.

6. Click on the desired event in the populated search result list. Video playback begins.

Backing Up A Video

To back up video to your computer:

1. Under the Search Tab click the **Search By Time** tab and then click **Backup**.

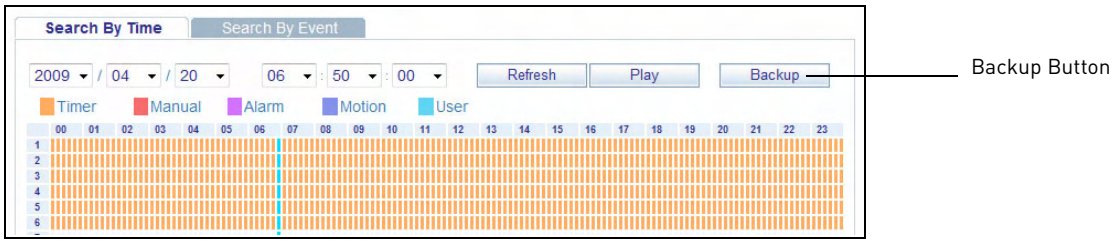


Figure 19.8 Click the Backup button to open the backup menu.

2. The Backup window opens. Using the drop-down menus, select the day, month, year and time range (Figure 34.8).

3. Under Channel Select, select what channels you wish to back up.

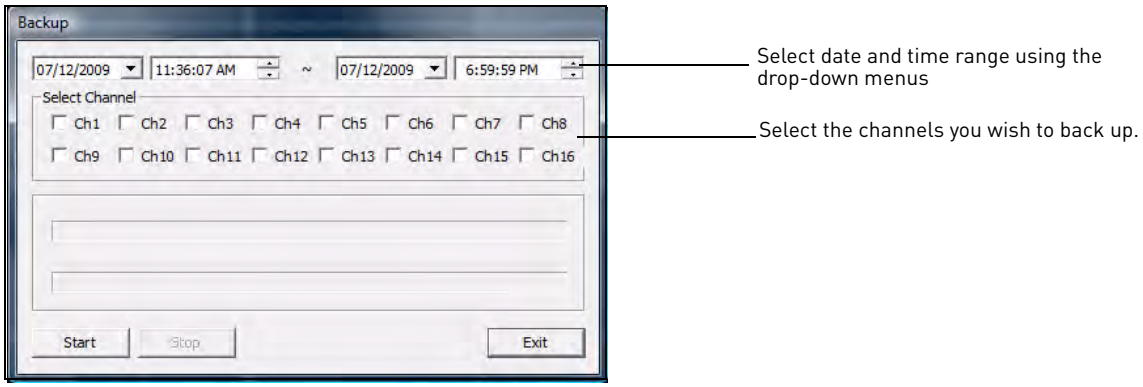


Figure 19.9 Backup menu (16-channel model shown).

4. Click **Start** to begin video backup.

NOTE: If selecting multiple cameras to record, multiple files are created. For example, if you select channels 1~3 to be recorded, three individual video files will be created.

NOTE: Videos are in AVI format.

The Setup Tab

The setup tab allows you to configure your camera, DVR and network settings.

The Setup tab allows you to configure eight main settings: **Camera**, **Display**, **Sound**, **System**, **Record**, and **Sensor**.

Each main menu expands into sub-menus. For example, the **Camera** setting expands into the Camera sub-menu, Color sub-menu, PTZ sub-menu, Motion sub-menu, and Mode sub-menu (Figure X).

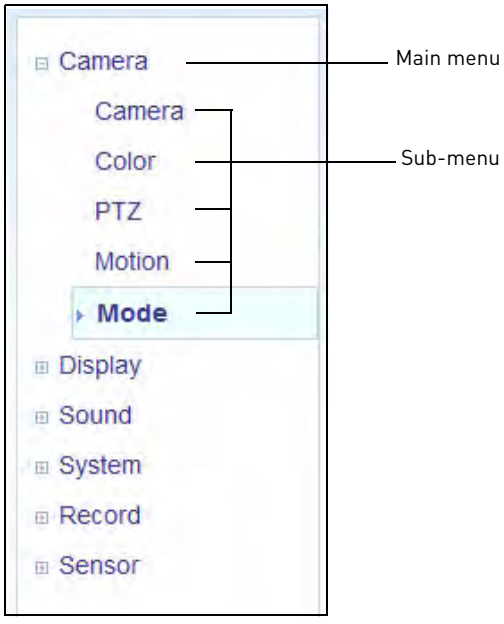


Figure 20.0 Navigation Menu.

Configuring Camera Settings

Setting Camera Name, Covert Settings and Camera Audio Input

To set up camera properties:

1. Click the **Setup** Tab near the top of the window. The Camera settings window opens.

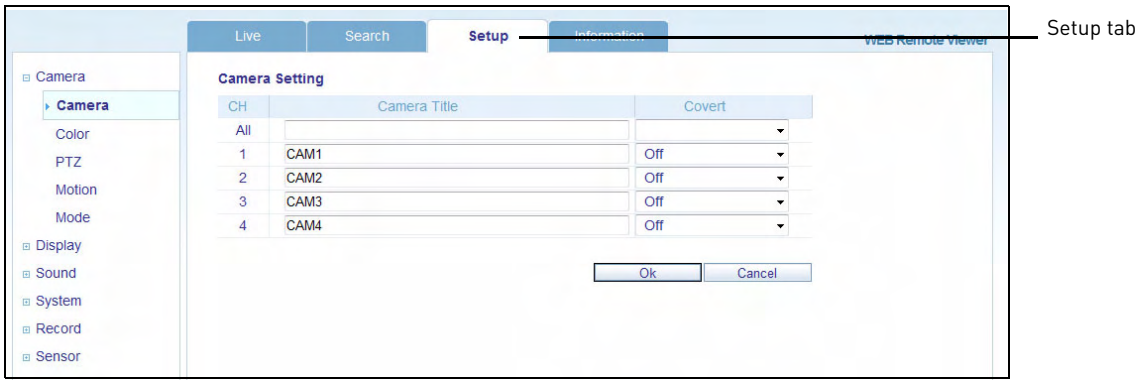


Figure 20.1 Camera Settings: Change camera title, enable/disable Covert recording mode, and enabling audio.

2. Under **Camera Title**, enter in a name of the camera. Enter in a name beside the **All** field to give all your cameras the same name.
3. Under **Covert**, select **ON** or **OFF**.
   NOTE: Under Covert recording, the camera view blacks out during recording. This gives the impression that the particular channels is inactive.
4. Under **Audio** select desired audio channel (Channels 0~4) to use with the specific channel.
5. Click **OK** to save your settings.

Adjusting Camera Color

To adjust the camera color:

1. Click the **Color** sub-menu (Camera>Color). The Color-Setting window opens.

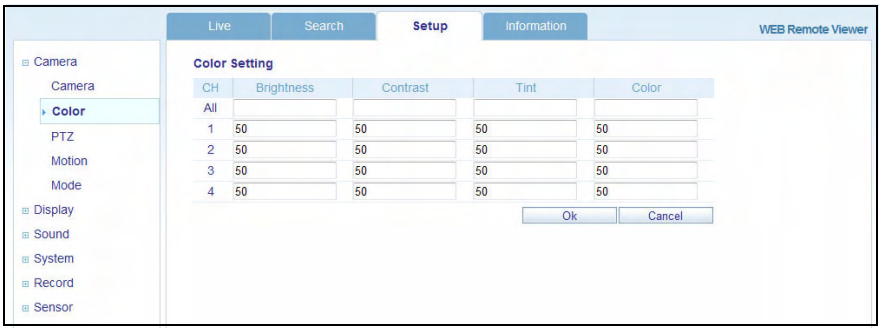


Figure 20.2 Adjust camera color settings.

2. Adjust **Brightness**, **Contrast**, **Tint** and **Color** by entering values between 0~100.
   • To apply the same settings across all cameras, enter all values beside **All**.
3. Click **OK** to save the settings.

Adjusting PTZ Settings

To adjust PTZ camera settings:

1. Click the **PTZ** sub-menu (Camera> PTZ). The PTZ sub-menu opens.

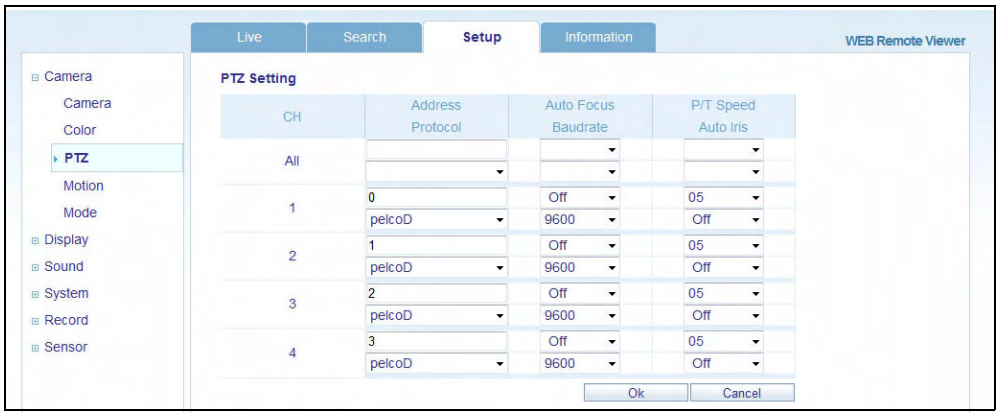


Figure 20.3 PTZ settings menu.

2. Under **Address Protocol** select the desired PTZ protocol to use from the drop-down menu.
   • Refer to your PTZ camera's user manual for the correct protocol to select.
3. Under **Auto Focus Baudrate**, select the desired baudrate from the drop-down menu.
   • Refer to your PTZ camera's user manual for the baudrate to select.
4. Under **P/T Speed**/ **Auto Iris**, select **ON** or **OFF** from the drop-down menu to enable or disable auto iris.
   • Select values between 1~10 from the drop-down menu to select the P/T (Pan/Tilt) speed of the PTZ camera.
5. Click **OK** near the bottom of the window to save your settings.

Configuring Camera Motion Detection Settings

Configuring motion settings on your camera allows you to tell the camera to trigger motion recording in a certain portion of the screen.

To configure the camera motion recording settings:

1. Click the **Motion** sub-menu (Camera>Motion). The Motion window opens.

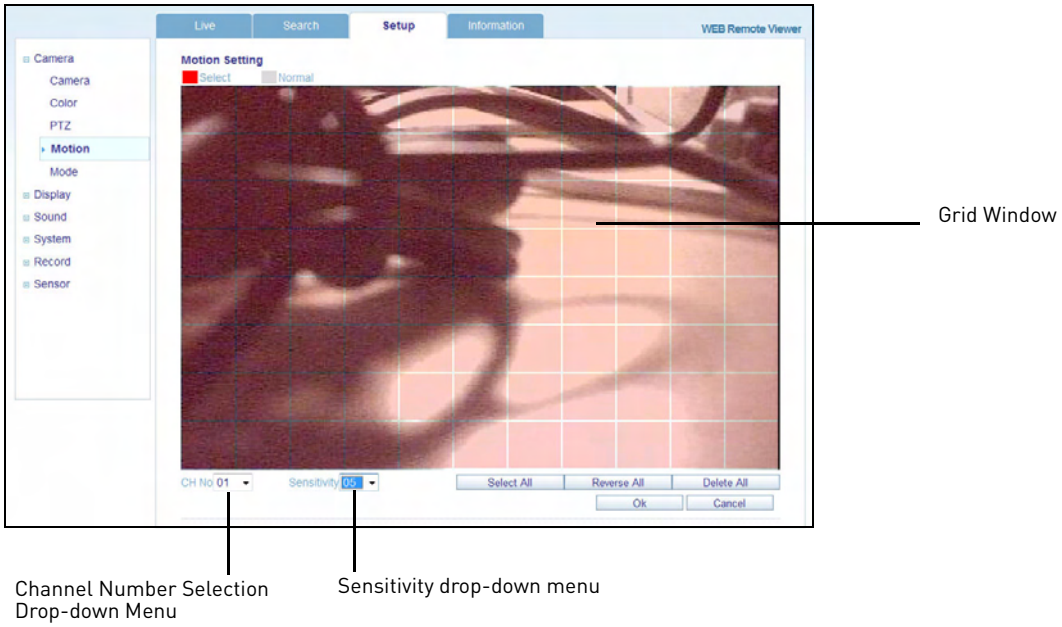


Figure 20.4 Motion Settings menu.

2. Under **CH No** select the channel number from the drop-down menu you wish to configure.
3. Under **Sensitivity** select sensitivity levels (1~10) from the drop-down menu.
4. Drag your cursor in the Grid Window, of where you wish to increase motion sensitivity.

In this example, the area around the van is highlighted. Once the van moves, it triggers motion recording.

Movement around the van will not trigger motion recording.

Figure 20.5 Adjusting motion sensitivity.

5. Click the **Select All** button to highlight the entire grid or;
   - Click the **Reverse All** button to reverse the grid area selection.
   - Click the **Delete All** button to delete all highlighted areas in the grid.
6. Click **OK** to save your settings.

Configuring Display Settings

Adjusting OSD (On Screen Display) Settings

To configure OSD settings:

1. Click **Display** on the navigation bar on the left. The OSD Settings window opens.

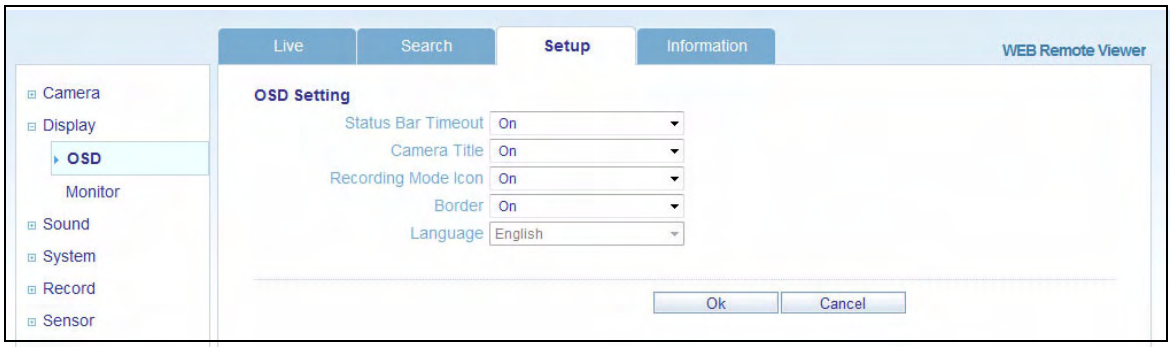


Figure 21.0 OSD Setting window.

2. Under the **Status Bar Timeout** drop-down menu, select the duration of when the status bar in the DVR menu "hides" or times out.
   - The Status Bar Timeout choices are: Always, 5 seconds, 10 seconds, 15 seconds, 20 seconds, 30 seconds, 1 minute.
3. Under the **Camera Title** drop-down menu, select **ON** or **OFF** to toggle the camera name display on or off when viewing video.
4. Under the **Recording Mode Icon** drop-down menu, select **ON** or **OFF** to toggle the recording mode icon on or off when viewing video.
5. Under the **Border** drop-down menu, select **ON** or **OFF** to toggle a border around a viewing window when a window is clicked.
6. Click **OK** to save your settings.

Adjusting Video Monitoring Settings

To adjust Montior Settings:

1. Click the **Monitor** sub-menu (Display>Monitor). The Monitor Setting window opens.

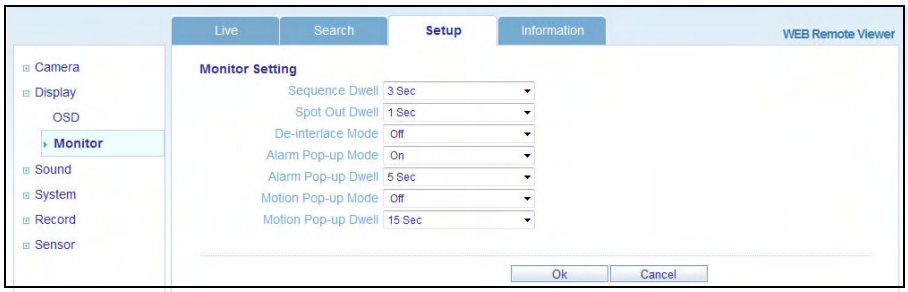


Figure 21.1 Monitor Setting window.

2. Under the **Sequence Dwell** drop-down menu, select the duration you want a sequence to remain on screen.
   - Sequence Dwell choices are: 1 second, 2 seconds, 3 seconds, 5 seconds, 10 seconds, 15 seconds, 20 seconds, 30 seconds, 40 seconds, 60 seconds.
3. Under the **Spot Out Dwell** drop-down menu, select the duration you want the spot dwell to last.
   - Spot Dwell choices are: 1 second, 2 seconds, 3 seconds, 5 seconds, 10 seconds, 15 seconds, 20 seconds, 30 seconds, 40 seconds, 60 seconds.
4. Under the **De-interlace Mode** drop-down menu, select **ON** or **OFF** to turn on or off de-interlacing mode.
   - It is recommended to turn de-interlacing mode on for improved image quality.
5. Under the **Alarm Pop-up Mode** drop-down menu, select **ON** or **OFF** to turn on or off Alarm Pop-up.
   - When an alarm recording is triggered, the Alarm Pop-up mode will automatically bring the channel with the alarm recording into full screen.
6. Under the **Alarm Pop-up Dwell** drop-down menu, select the duration of the Alarm Pop-up.
   - Alarm Pop-up Dwell durations are: 1 second, 2 seconds, 3 seconds, 5 seconds, 10 seconds, 15 seconds, 20 seconds, 30 seconds, 40 seconds, 60 seconds.
7. Under the **Motion Pop-up Mode** drop-down menu, select **ON** or **OFF** to turn on or off Motion Pop-up Mode.
   - When a Motion Recording is triggered, the Motion Pop-up mode will automatically bring the channel with the motion recording into full screen.
8. Under the **Motion Pop-up Dwell** drop-down menu, select the duration of the motion pop-up window.
   - Motion Pop-up Durations are:1 second, 2 seconds, 3 seconds, 5 seconds, 10 seconds, 15 seconds, 20 seconds, 30 seconds, 40 seconds, 60 seconds.
9. Click **OK** to save your settings.

Adjusting Audio Settings

To adjust audio settings:

1. Click **Sound** on the navigation bar on the left. The Audio Setting window opens.

Figure 21.2 Audio Setting window.

2. Under the **Live Audio** drop-down menu, select **ON** or **OFF** to enable or disable live audio.
3. Under the **Network Audio Transmission (2-way audio)** drop-down menu, select **ON** or **OFF** to enable or disable two-way audio.
4. Under the **Network Audio Receive (1-way audio)** drop-down menu, select **ON** or **OFF** to enable or disable one-way audio.
5. Under the **Keypad** drop-down menu, select **ON** or **OFF** to enable or disable the button 'beeps' on the DVR.
6. Under the **Remote Control** drop-down menu, select **ON** or **OFF** to enable or disable the remote control "beeps".
7. Click **OK** to save your settings.

Configuring System Settings

Configuring Date and Time

To configure your DVR's date and time:

1. Click **System** on the navigation bar on the left. The Date/Time setting window opens.

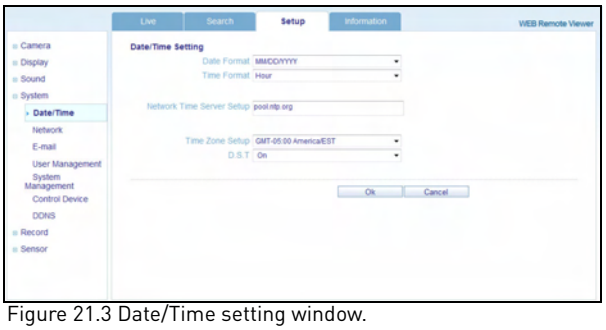


Figure 21.3 Date/Time setting window.

2. Under the **Date Format** drop-down menu, select the format you want the dates to display.
   - Date format options are: YYYY/MM/DD or MM/DD/YYYY or DD/MM/YYYY.
3. Under the **Time Format** drop-down menu, select **24-hour** to enable 24-hour clock display. Select **AM/PM** to enable 12-hour clock display.
4. Under **Network Time Server Setup**, type in the address you want the DVR to retrieve the time (by default: POOL.NTP.ORG).
5. Under the **Time Zone Setup** drop-down menu, select your local time zone.
6. Under the **D.S.T** drop-down menu, select **ON** or **OFF** to enable or disable daylight savings time.
7. Click **OK** to save your settings.

Configuring Network Settings

Adjusting DVR Bandwidth Speed

To adjust DVR bandwidth speed:

1. Click **Network** on the navigation menu on the left. The IP Setup Setting window opens.

Figure 21.4 IP Setup Setting window.

2. Under the **Bandwidth** drop-down menu, select the desired bandwidth speed. It is recommended to leave this at the highest setting (**8192 Kbyte**).
3. Click **OK** to save your settings.

Configuring An E-mail Server For The DVR

To configure the e-mail server settings for your DVR:

1. Click the **E-mail** sub-menu on navigation bar on the left (System >E-mail).The E-mail setting window opens.

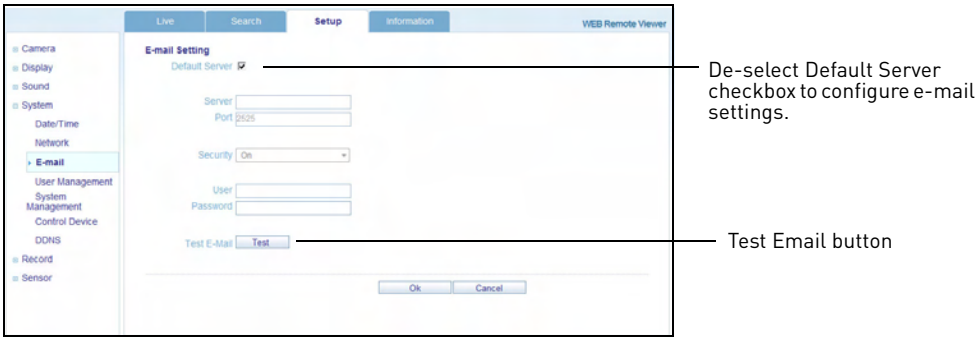


Figure 21.5 E-mail Setting window.

2. De-select the **Default Server** checkbox to manually input your e-mail server information.
   - By default, the Default Server is left enabled.
   - It is recommended to leave the Default Server **on**.

   NOTE: If you select the Default Server checkbox, the system uses the Lorex e-mail server to send you notification e-mails. It is recommended to leave the Default Server enabled.
   - When the Default Server is left enabled, you cannot configure the e-mail settings.
3. Fill in the blank fields with the appropriate information.
   - The blank fields are: Server, Port, Security, User, Password, From.
   - Under **Server**, enter in your e-mail server's SMTP address.
   - Under **Port**, enter the port number of the e-mail server.
   - Under **User** and **Password**, enter in the e-mail user name and password.
   - Under **From**, enter where the e-mail address of the sender.
4. Click **OK** to save your settings.

Testing the E-mail Server

- In the Test Email field, enter an e-mail address to receive a test e-mail from the system. Click the **Test** button to send out the e-mail. If the e-mail configuration is functional, a success message appears.

Configuring User Settings

Adding Users To The DVR

Setting User types allows the administrator to grant access to multiple users. The admin can set user password and email notifications settings.

To set user privileges on the DVR:

1. Click **User** sub-menu on the navigation bar on the left (System > User Management). The User Management Setting window opens.

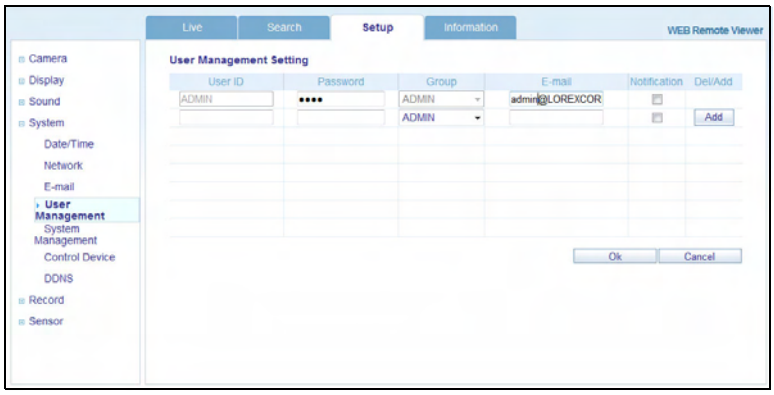


Figure 21.6 User Management Setting window.

2. Under the **User ID** field, enter in the desired user name. By default, the **ADMIN** user name is grayed out.
3. Under the **Password** field, enter desired user password.
4. Under the **Group** drop-down menu, select the desired user level: **ADMIN**, **MANAGER**, **USER**.
5. Under the **E-mail** field, enter a desired e-mail address to receive e-mail notifications from the DVR.
6. Under **Notification**, select the blank checkbox to enable e-mail notification for the particular user. De-select the checkbox to disable e-mail notification for the particular user.
7. Under **Del/Add**, click the **Add** button to add user to the list.
   • Click the **Del** button beside a user name to remove a user from the list.
8. Click **OK** to save your settings.

Viewing System Information

To view your DVR's system information:

1. Click the **System Management** sub-menu (System>System Management). The System Information Setting window opens.

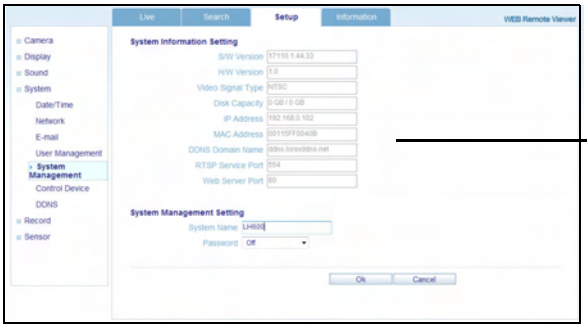


Figure 21.7 System Management window.

- Under System Information Setting, your DVR's system information is displayed.

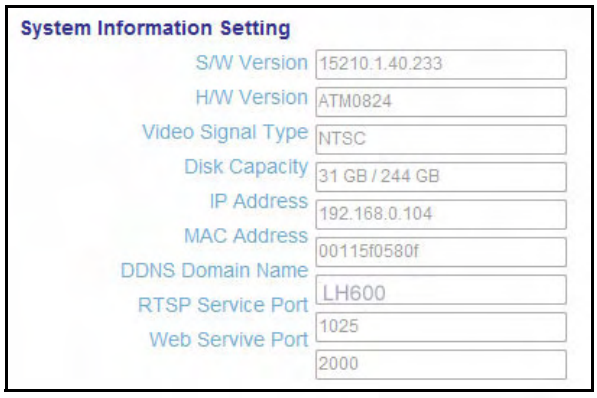


Figure 21.8 System Information Setting window.

Changing Your DVR's Name

To change your DVR's name:

1. Click the **System Management** sub-menu (System> System Management). The System Information Setting window opens.

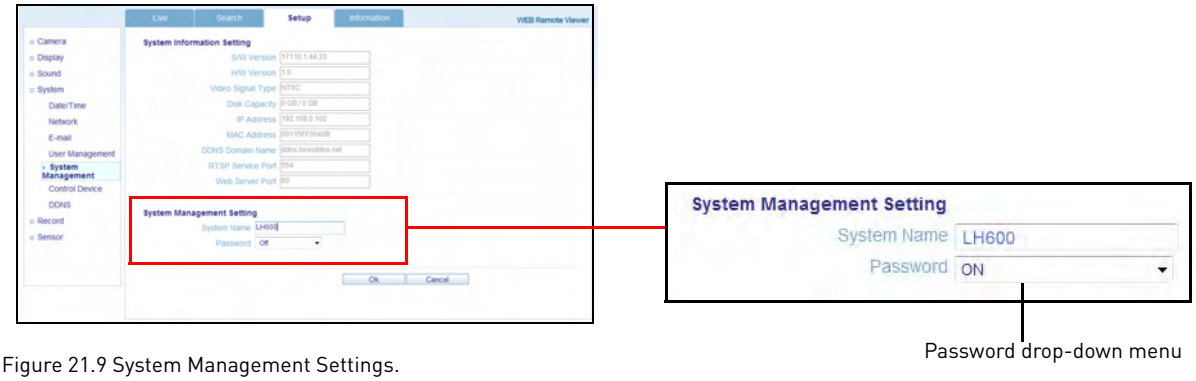


Figure 21.9 System Management Settings.

2. Under the **System Name** field, enter in your desired DVR name.
3. Click **OK** to save your settings.

Enabling / Disabling the DVR's Password

1. Click the **System Management** sub-menu (System> System Management). The System Information Setting window opens.
2. Under the **Password** drop-down menu, select **ON** or **OFF** to enable or disable your DVR's password prompt during login (Figure 36.6).
3. Click **OK** to save your settings.

Changing PTZ Keyboard Settings

Refer to your PTZ (pan tilt zoom) Keyboard manual for the proper protocol and baud rate settings.

To change your PTZ Keyboard settings:

1. Click **Control Device** in the sub-menu (System>Control Device). The Control Device Setting window opens.

Figure 21.10 Control Device Setting window.

2. Under the **System ID** drop-down menu, select an ID between 00~255.
3. Under the **Protocol** drop-down menu, select desired protocol.
4. Click **OK** to save your settings.

Configuring DDNS Settings.

Enabling DDNS

Create a DDNS account and before configuring your DDNS settings.

- For details on setting up a DDNS account, see “Setting Up DDNS Service” on page 106.

To enter your DDNS settings remotely using Web Remote Viewer:

1. Click the **DDNS sub-menu** on the navigation menu on the left (System > DDNS). The IP Setup Setting window opens.
2. Click **DDNS**. The DDNS Setup Setting window opens.

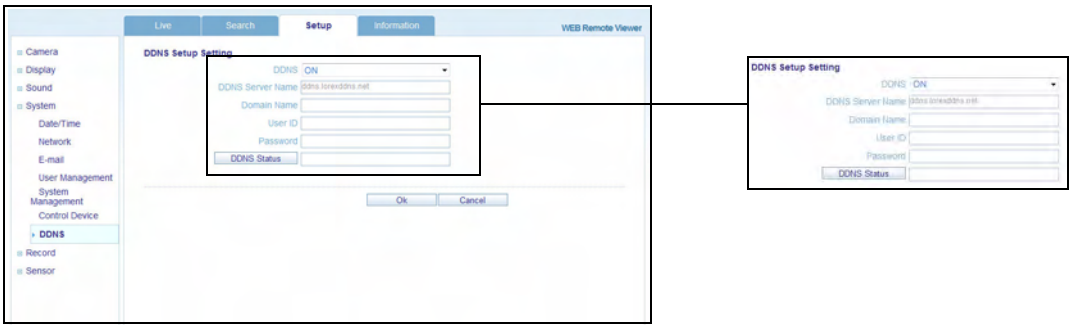


Figure 22.0 DDNS Configuration.

3. In the DDNS drop-down menu, select **ON**
4. In the User ID field, enter the User ID of your DDNS account.
5. In the Domain Name field, enter the sub-domain of your DDNS address.
   - For example if your DDNS address is tomsmith.lorexddns.net, your sub-domain is **tomsmith**.
6. In the Password field, enter your DDNS account’s login password.
7. Click the **DDNS Status** button to confirm DDNS is functional.
8. Click **OK** to save your settings.

Configuring Recording Settings

Adjusting Pre and Post Alarm Duration

The Pre and Post Alarm Duration recording refers to the time the system records before and after an event occurs. For example, when you search for video, the event begins playing 5 seconds before the event happened, and 30 seconds after the event occured.

To configure Pre and Post recording time:

1. Click **Record** on the navigation bar on the left. The Record Operation Setting window opens.

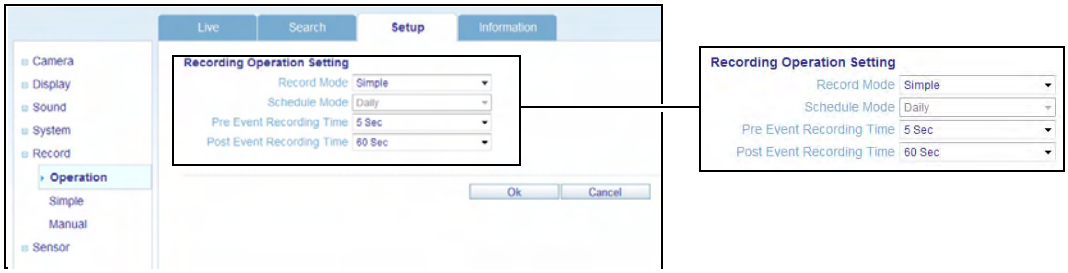


Figure 22.1 Record Operation Setting window.

2. Under the **Pre Event Recording Time** drop-down menu, select the duration of the pre-event recording.
3. Under the **Post Event Recording Time** drop-down menu, select the duration of the post-event recording.
4. Click **OK** to save your settings.

Selecting Recording Mode: Simple vs Advanced

The system offers Simple and Advanced recording modes. Simple recording mode allows you to configure the system to record with basic recording settings, with limited customization to the type of recording (i.e. motion recording) that applies.

Advanced recording mode allows you to configure the system to record with customized settings. For example, you can configure the system to record with a certain resolution on a Saturday, and have the system record with another resolution on a Monday.

To configure the system's recording type:

1. Click **Record** on the navigation bar on the left. The Record Operation Setting window opens.
2. Under the Record Mode drop-down menu, select **Simple** or **Advanced**.
3. Click **OK** to save your settings.

Figure 22.2 Recording Operation Setting window.

Configuring "Simple" Recording Mode

To configure "Simple" recording mode:

1. Click **Simple** on the navigation bar on the left. The Simple Recording window opens.

Figure 22.3 Simple Recording window.

2. Configure the following:
   - **Quality**: Use the drop-down menu and select the video quality (**Low, Standard, High, Highest**).
   - **Resolution**: Use the drop-down menu and select video resolution the system should record with (**352 x 240, 704 x 240, 704 x 480**).
   - **Frame Rate**: Use the drop-down menu and select the desired recording frame rate (frame rate values differ depending on resolution selected).
3. Select a recording type (Continuous, Motion, Alarm, None).
4. Drag the mouse cursor on the channel grids to apply the desired recording type.

   NOTE: You can combine different recording types within the same channel.
5. Click **OK** to save your settings.

Adjusting Advanced Recording Settings

To configure "Advanced" recording mode:

1. Click Advanced on the navigation bar on the left. The Advanced Recording window opens.

Figure 22.4 Advanced Recording window.

2. Beside **Time**, drag your cursor across the grayed out boxes to highlight what time you want to activate recording. When you release the cursor, the boxes turn pink to confirm your selection. This applies the recording time globally.

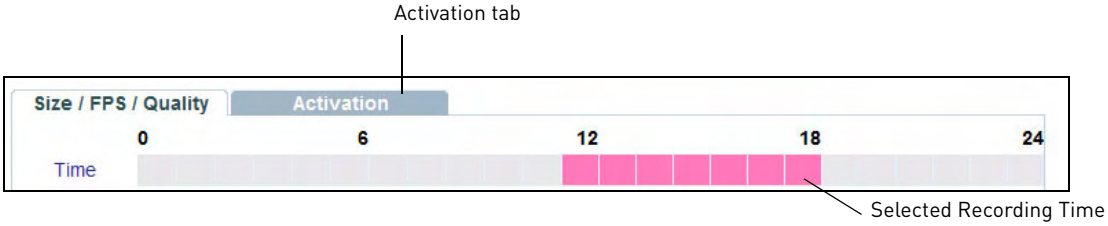


Figure 22.5 Setting the time duration of continuous and motion recording. The pink boxes indicate active recording times. In this example, the active recording times are from 12:00PM to 6:00PM.

3. Configure the recording parameter of each channel:
   - **Resolution**: Select the resolution the video records in.

     NOTE: The far-right column, under **FPS**, shows you how many FPS you have remaining.

   - **Frame Rate**: Select the frame rate of the video. Frame rate values differ depending on resolution settings.
   - **Quality**: Select the video recording quality.
   - **Audio**: Select **ON** or **OFF** to enable or disable audio recording (microphone required, not included).
   - **Alarm:** Select the alarm device connected to the Alarm block of the system (i.e. motion sensor, not included).

- To configure each channel with specific recording parameters, click the **Activation** tab.

Configuring the Activation Tab

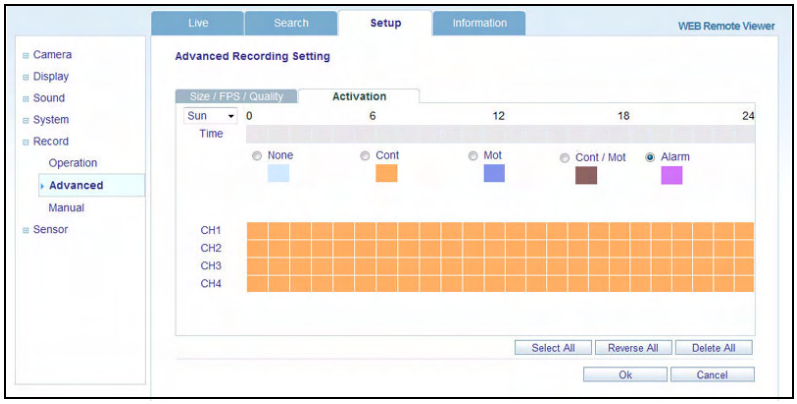


Figure 22.6 Activation tab.

To configure the Activation tab:

1. Select the recording type (**Cont** (continuous recording); **Mot** (motion recording); **Cont/Mot** (continuous and motion recording)); **Alarm** (alarm recording)
2. Drag your cursor across the channel bar to select the duration of recording.
   - **Optional**: Select a second and third recording type (**Cont, Mot, Cont/Mot**) and drag your cursor across the channel bar.
3. Use the **Select All**, **Reverse All**, **Delete All** buttons near the bottom of the window to manipulate what you select.
4. Click **OK** to save your settings.

   NOTE: You can mix recording types in a channel.

Configuring Panic Recording Settings

To configure Panic Recording Settings:

1. Click the **Panic** sub-menu on the navigation bar on the left (Record>Panic). The Panic Recording Setting window opens.

Figure 22.7 Panic Recording Setting window.

2. Under the **Size** (resolution) drop-down menu, select the desired resolution for the specific channel.
   • The Resolution choices are: 352 x 240, 704 x 240, 704 x 480.
3. Under the **Framerate** drop-down menu, select the desired frame rate for the specific channel.
   • Frame rate choices (in FPS) are: 1, 2, 3, 7, 15, 30.
   • The far-right column, under **FPS**, shows you how many FPS you have remaining.
4. Under **Quality**, select the quality of video during panic recording for the specific channel.
5. Under **Audio**, select **ON** or **OFF** to enable or disable audio for the specific channel during Panic recording.
6. Click **OK** to save your settings.

Configuring HDD Event Settings

Your DVR's hard drive can detect immenent failure. You can configure how often the hard drive monitors itself for failure. If the hard drive detects a error, it sends out a notification e-mail.

To configure your HDDs monitoring settings:

1. Click **Sensor** on the navigation menu on the left. The HDD Event Setting window opens.

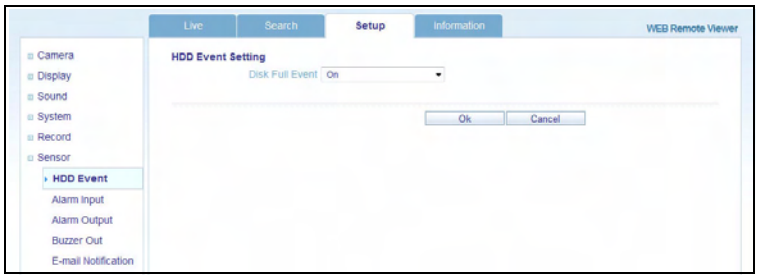


Figure 23.0 HDD Event Setting window.

2. Under the **Disk Full Event** drop-down menu, select **ON** or **OFF** to enable or disable the hard drive from notifying you via e-mail, if the hard drive is full.
3. Click **OK** to save your settings.

Configuring Alarm Input Settings

To configure your alarm input settings:

1. Click the **Alarm Input** sub-menu on the navigation bar on the left (Sensor>Alarm Input). The Alarm Input Setting window opens.

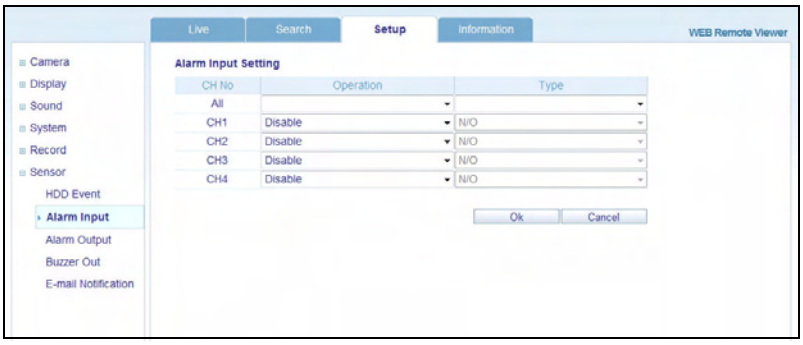


Figure 23.1 Alarm Input Setting window.

2. Under the **Operation** drop-down menu, select **Enable** or **Disable** to enable or disable alarm input on the particular channel.

NOTE: To apply changes across all channels, use the **ALL** drop-down menu.

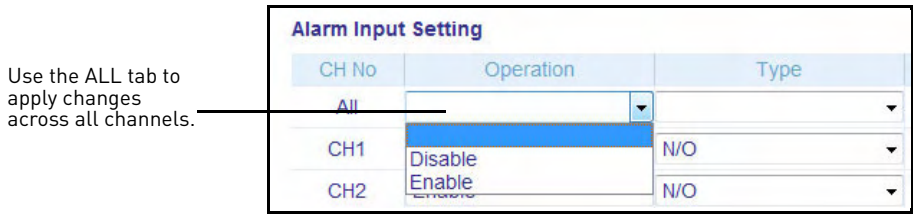


Figure 23.2 Alarm Input Setting window.

3. Under the **Type** drop-down menu, select if the alarm is normally open (**N/O**) or normally closed (**N/C**).
4. Click **OK** to save your settings.

Configuring Alarm Output Settings

To configure alarm output settings:

1. Click the **Alarm Output** sub-menu on the left navigation bar (Sensor>Alarm Output). The Alarm Output Setting window opens.

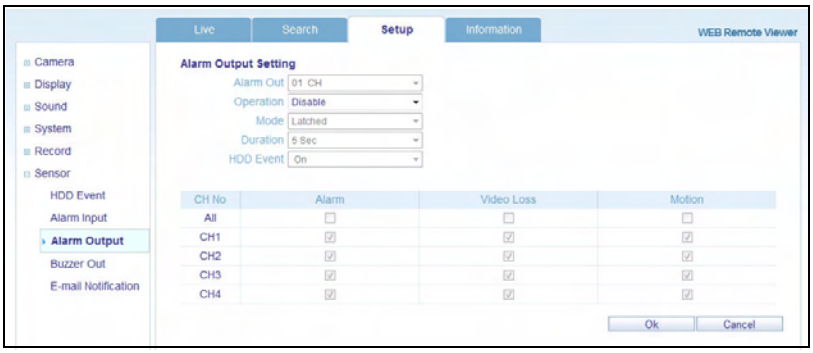
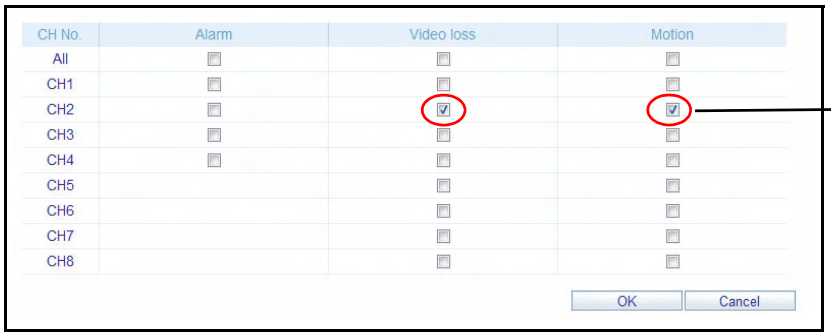


Figure 23.3 Alarm Output window.

2. Under the **Operation** drop-down menu, select **Enable** or **Disable** to turn on or off alarm the alarm output.
3. Under the **Mode** drop-down menu, select **Latched** or **Transparent**.
   - Latched alarms continually "beep" long after a camera detects motion. Transparent alarms "beep" only when there is motion. Once the camera does not detect motion, the "beeping" stops.
4. Under the **HDD Event** drop-down menu, select **ON** or **OFF** to enable or disable a hard disk failure to send out an e-mail notification.
5. For each channel, select which events you want to trigger an alarm (Figure 38.4).
   - For example, you may want a video loss and motion event in channel 2 to trigger an alarm.
6. Click **OK** to save your settings.

Configuring Buzzer Out Settings



In this example, Video Loss and Motion is selected in channel 2. If video loss or motion occurs in channel 2, it triggers an alarm output.

Figure 23.4 Alarm output selection.

To configure Buzzer Out settings:

1. Click the **Buzzer Out** sub-menu on the navigation bar on the left (Sensor>Buzzer Out). The Buzzer Out Setting window opens.

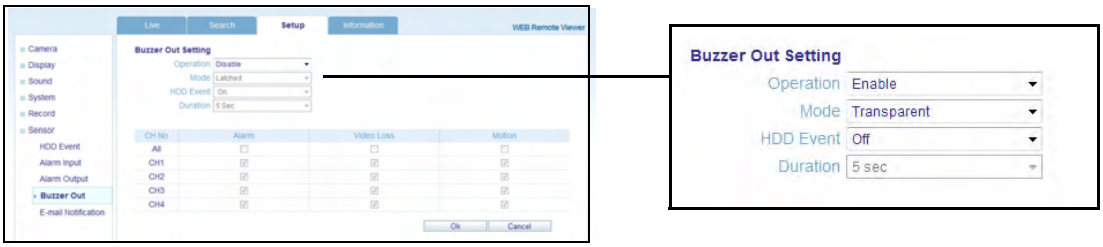


Figure 23.5 Buzzer Out Settings window.

2. Under the **Operation** drop-down menu, select **Enable** configure buzzer settings.
3. Under the **Mode** drop-down menu, select **Transparent** or **Latched**.
4. Under the **HDD** Event drop-down menu, select **ON** to enable to trigger the buzzer when an HDD event occurs.
5. For each channel, select which events you want to trigger the buzzer (Figure 38.4).
   - For example, you may want a video loss and motion event in channel 2 to trigger a buzzer.
6. Click **OK** to save your settings.

Configure E-mail Notification

To configure your e-mail notification settings:

1. Click the **E-mail Notification** sub-menu on the navigation bar on the left (Sensor>E-mail Notification). The E-mail Notification Setting window opens.

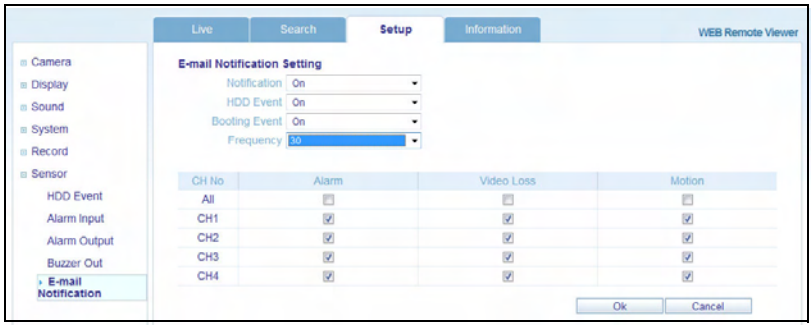


Figure 23.6 E-mail Notification Setting window.

2. Under the **Notification** drop-down menu, select **ON** to enable e-mail notification.
3. Under the **HDD Event** drop-down menu, select **ON** to enable the DVR to send out an e-mail notification when a hard drive event occurs.
4. Under the **Booting Event** drop down menu, select **ON** to enable the DVR to send out an e-mail when the DVR reboots.
5. Under the **Frequency** drop-down menu, select the interval of how often e-mail notifications are sent to you when an event occurs.
6. For each channel, select which events you want to trigger an e-mail notification (Figure 38.4).
   - For example, you may want a video loss and motion event in channel 2 to trigger a e-mail notification to be sent.

SETTING UP REMOTE VIEWING

Your LH600 Series system is capable of remote connectivity. You can connect to your system through:

- A remote computer via web browser (Internet Explorer & Safari)
- A Mobile Device (iPhone™, Blackberry™, Windows Mobile™)

Advanced Monitoring using DDNS

- DDNS allows you to connect to your system remotely using a computer or mobile device.
- Port forwarding is required.

Steps Required:

1. Port forward ports **80** and **554** to your router using one of the following:
   - The Auto Port Forwarding feature on the system.
   - The Auto Port Forwarding Wizard (included on software CD).
2. Create a Lorex DDNS account.
3. Enable DDNS on your system.

- For details on the Auto Port Forwarding feature on the system, see “Auto Port Forwarding” on page 46.
- For details on the Auto Port Forwarding Wizard, see “Lorex Auto Port Forwarding Wizard” on page 99.
- For details on creating a DDNS account, see “Setting Up DDNS Service” on page 106.
- For details on enabling DDNS on your system,see “Network Tab” on page 45.

ADVANCED REMOTE MONITORING USING DDNS

Setting up remote viewing requires several steps. Networking skills are required to correctly configure the remote viewing functions.

What Do I Need?

- DVR System
- A router (not provided with the system) and High Speed Cable or DSL Internet Connectivity (for remote viewing outside your network)

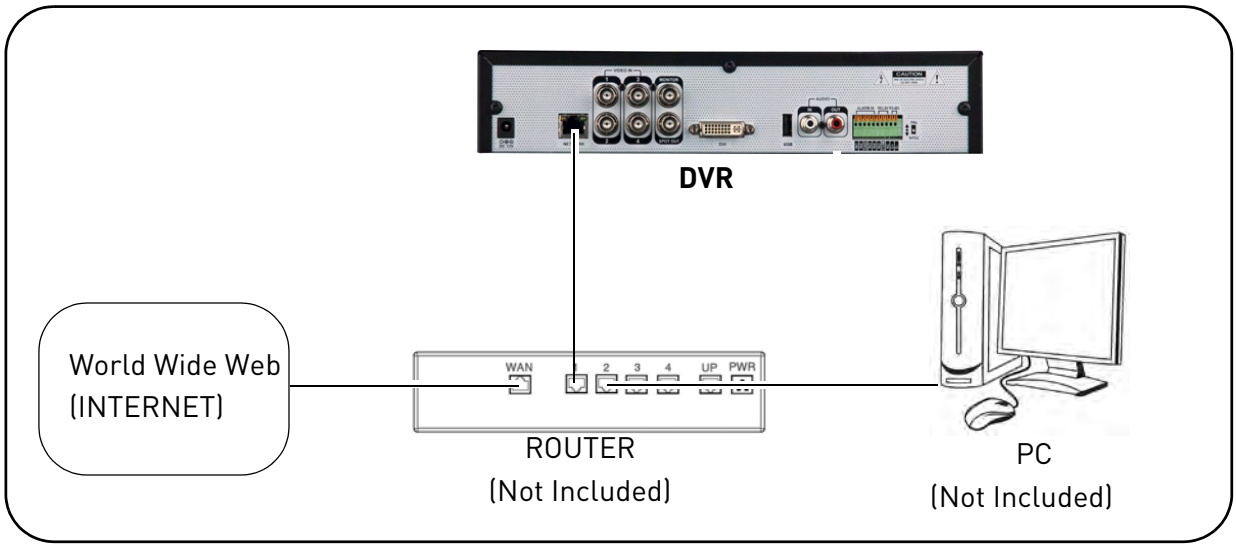


Figure 24.0 Remote monitoring connectivity diagram.

Network Setup / Remote Access Overview

To setup remote viewing:

1. With the system powered off, connect the system to the router using an Ethernet cable.
   NOTE: You must connect the system to the router prior to turning on the system. This allows the system and router to communicate over the network.
2. Power on the system.
   - Wait for the system to boot to the main viewing window.
3. Press the **Return** button on the front panel to find your system's IP address.
4. Port Forward the required ports on your router using one of the following:
   - Lorex Auto Port Forwarding Wizard (For details, see "Lorex Auto Port Forwarding Wizard" on page 99).
   - The **AUTOPORT** button in the system's network settings.
5. Setup an account at http://www.lorexddns.net

How Do I Find My IP and MAC addresses?

The IP and MAC address of your system are necessary for DDNS setup. DDNS allows you to view and control your system from a remote location by using a simple and easy to remember web address (i.e tomsmith.lorexddns.net).

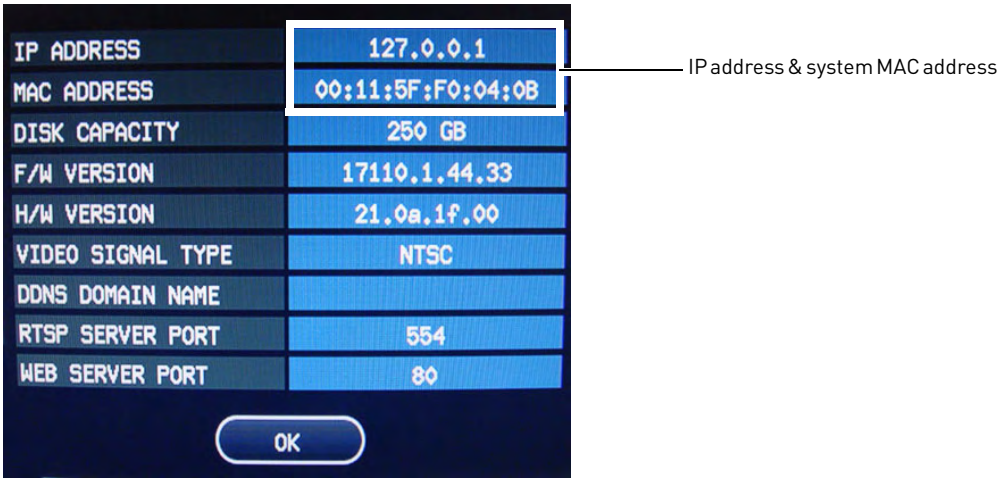


Figure 24.1 DVR Status screen.

To find your IP and MAC address:

- Press the **RETURN** button on the front control panel of the system (in main viewing mode)

OR

- Press the **F1** button on the remote control (in main viewing mode).

OR

1. Right-click in the main viewing window to open the Quick Menu.
2. Click **SYSTEM SETUP→SYSTEM→SYSTEM MANAGEMENT**
3. Beside SYSTEM INFORMATION, click the **PRESS** button.

What is Port Forwarding?

You need to enable port forwarding on your router to allow for external communications with your system for the following ports:

- **80 and 554 (default)**

Computers, DVRs, and other devices inside your network can only communicate directly with each other within the internal network. Computers and systems outside your network cannot directly communicate with these devices. When a system on the internal network needs to send or receive information from a system outside the network (i.e. from the Internet), the information is sent to the router.

NETWORK EXAMPLE

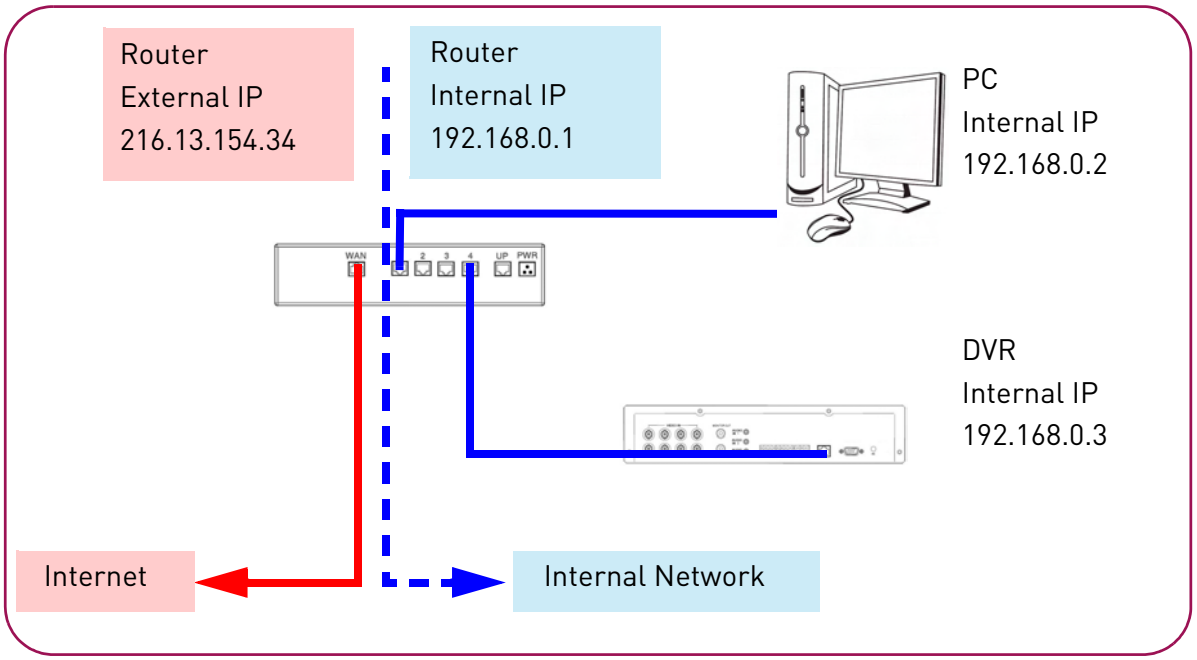


Figure 24.2 Port forwarding diagram.

When a computer on the Internet needs to send data to your internal network, it sends this data to the external IP address of the Router. The Router then needs to decide where this data is to be sent to. This is where setting up Port Forwarding becomes important.

Port Forwarding tells the router which device on the internal network to send the data to. When you set up port forwarding on your Router, it takes the data from the external IP **address:port** number and sends that data to an internal IP address:port number (i.e. Router External IP 216.13.154.34 to DVR Internal IP **192.168.0.3:554**).

To port forward, use the Lorex Auto Port Forwarding Wizard (included in the Software CD), or use the AUTOPORT feature on the system.

LOREX AUTO PORT FORWARDING WIZARD

The Lorex Auto Port Forwarding Wizard is an exclusive software that easily automates router port forwarding. Before setting up a DDNS account, it is recommended to run the Auto Port Forwarding Wizard to port forward the required ports.

Installation

To install the Lorex Auto Port Forwarding Wizard:

1. Insert the system's software CD, and follow the instructions to launch the Lorex Auto Port Forwarding Wizard software.
   - The installation window opens.
2. Click **Next** to continue.

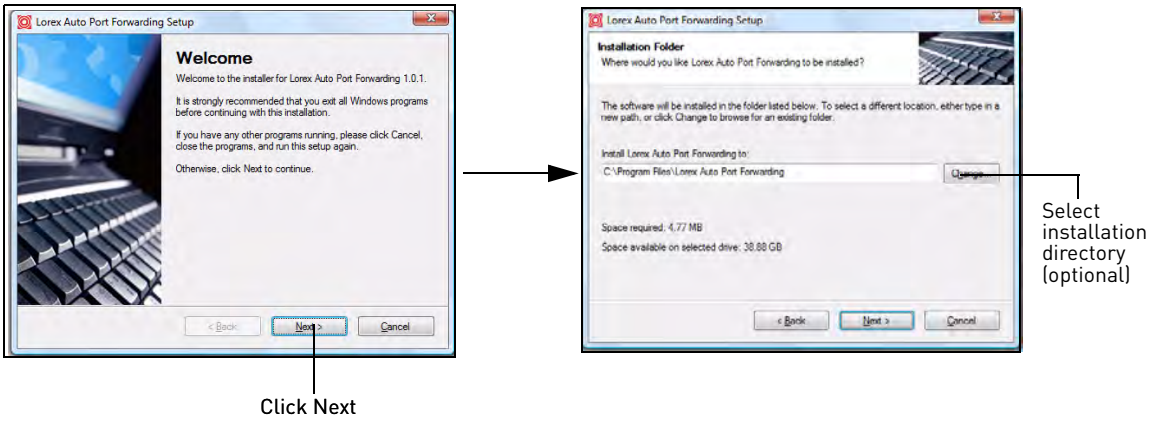

Lorex Auto Port Forwarding Setup
Welcome
Welcome to the installer for Lorex Auto Port Forwarding 1.0.1.
It is strongly recommended that you exit all Windows programs before continuing with this installation.
If you have any other programs running, please click Cancel, close the programs, and run this setup again.
Otherwise, click Next to continue.
< Back
Next >
Cancel
Click Next
Lorex Auto Port Forwarding Setup
Installation Folder
Where would you like Lorex Auto Port Forwarding to be installed?
The software will be installed in the folder listed below. To select a different location, either type in a new path, or click Change to browse for an existing folder.
Install Lorex Auto Port Forwarding to:
C:\Program Files\Lorex Auto Port Forwarding
Change...
Space required: 4.77 MB
Space available on selected drive: 38.88 GB
< Back
Next >
Cancel
Select installation directory (optional)

Figure 25.0 Auto Port Forwarding Wizard installation menu.

3. Click the **Change** button to change the default installation directory (optional). Click the **Next** button to continue.
4. Select the users who can see the Auto Port Forwarding shortcut (Optional). Click the **Next** button to continue.

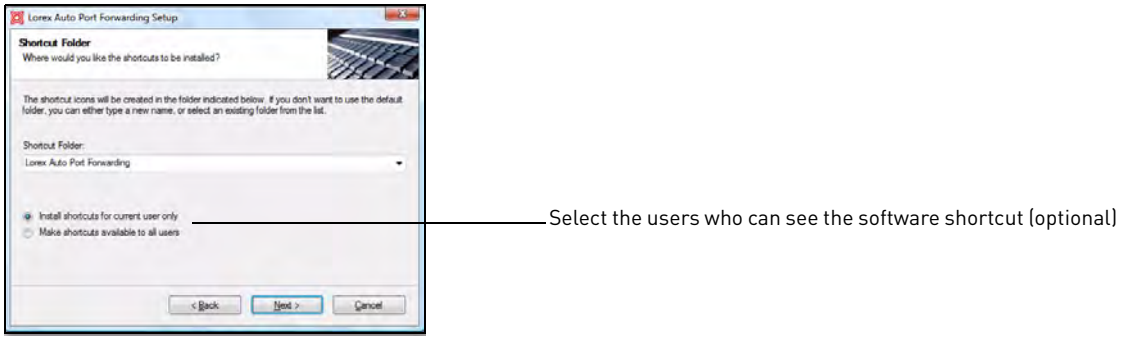

Lorex Auto Port Forwarding Setup
Shortcut Folder
Where would you like the shortcuts to be installed?
The shortcut icons will be created in the folder indicated below. If you don't want to use the default folder, you can either type a new name, or select an existing folder from the list.
Shortcut Folder:
Lorex Auto Port Forwarding
Install shortcuts for current user only
Make shortcuts available to all users
< Back
Next >
Cancel
Select the users who can see the software shortcut (optional)

Figure 25.1 Auto Port Forwarding Wizard installation - user selection.

5. Click the **Next** button and then click **Finish** to complete the software installation.

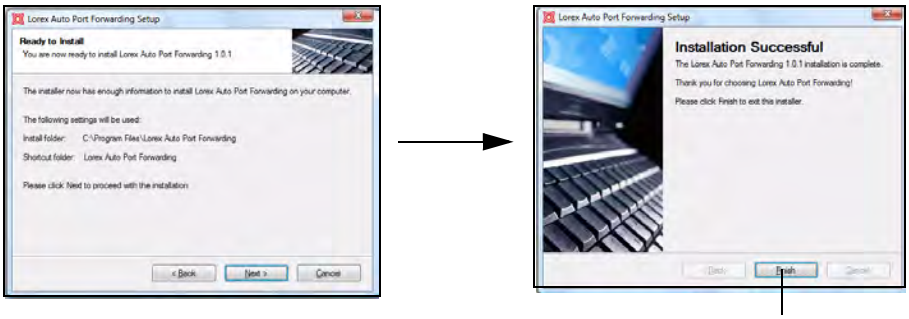

Lorex Auto Port Forwarding Setup
Ready to Install
You are now ready to install Lorex Auto Port Forwarding 1.0.1
The installer now has enough information to install Lorex Auto Port Forwarding on your computer.
The following settings will be used:
Install folder: C:\Program Files\Lorex Auto Port Forwarding
Shortcut folder: Lorex Auto Port Forwarding
Please click Next to proceed with the installation
< Back
Next >
Cancel
Lorex Auto Port Forwarding Setup
Installation Successful
The Lorex Auto Port Forwarding 1.0.1 installation is complete.
Thank you for choosing Lorex Auto Port Forwarding!
Please click Finish to exit this installer.
Finish
Cancel
Finish button

Figure 25.6 Completing the installation.

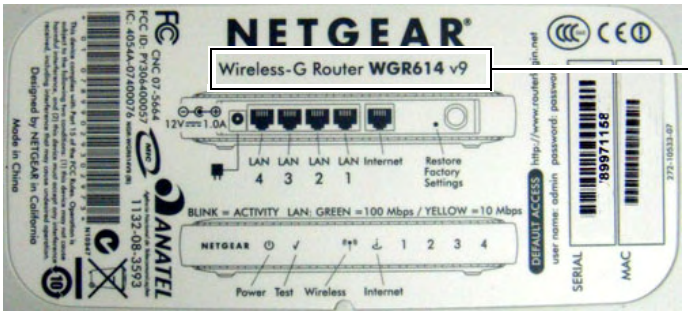
6. Double-click the Lorex Auto Port Forwarding shortcut (

)from your desktop to start the program.

Obtaining Your Router Model Number and Version

On most routers, the model and version number can be found underneath the router, printed on a sticker.

Example



- WGR614 refers to the model number
- v9 refers to the version number

Figure 25.7 X Finding your router model and version.

Configuration

You must have the following before you configure the software:

1. Your router's model number and version number
2. Your router's user name and password
3. Your Lorex device's IP address
4. Your Lorex device's port numbers that require port forwarding

Initial Startup: Select language

1. Click the Language drop-down menu and select a language (English, French, Spanish). Click the **Start** button to continue.

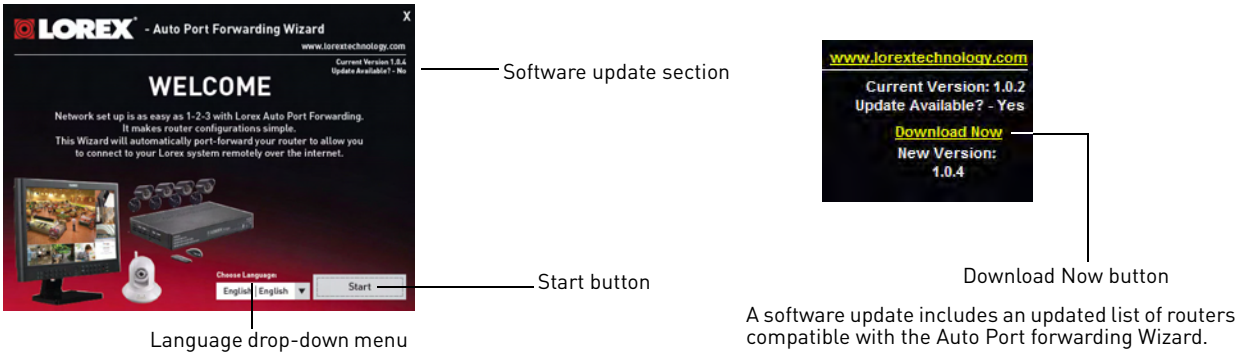

LOREX - Auto Port Forwarding Wizard
www.lorextechnology.com
WELCOME
Network set up is as easy as 1-2-3 with Lorex Auto Port Forwarding.
It makes router configurations simple.
This Wizard will automatically port-forward your router to allow you to connect to your Lorex system remotely over the internet.
Choose Language:
English
Start
Software update section
Start button
Language drop-down menu
www.lorextechnology.com
Current Version: 1.0.2
Update Available? - Yes
Download Now
New Version:
1.0.4
Download Now button
A software update includes an updated list of routers compatible with the Auto Port forwarding Wizard.

Figure 25.8 Initial setup window.

2. If software updates are available, click the **Download Now** button in the top-right corner.
   - Run the update file and install the latest version of the software.

Step 1: Populate the router database

The Auto Port Forwarding Wizard automatically populates a list of current routers, and detects the number of connected routers.

1. Click the **Next** button after the software detects your router configuration.

LOREX - Auto Port Forwarding Wizard
www.lorextechnology.com
Step 1/3
Downloading Router Database...
100%
Transfer Rate - 119.57 KB/s
Status - Download Successful!
Checking for multiple routers...
Number of Routers: 1
Checking for routers...
Possible 1st Router: XXX.XXX.XX.XX
Routers Found: 1
Please have the following information ready.
1. Your Router Make & Model
2. Your Router Username & Password
3. Your Lorex Product Information. Such as the device IP & port number (refer to your Quick Start Guide to help you obtain this information).
Next
Click to update router database
Click to check for multiple routers

Figure 25.9 Router detection window.

If more than one router is detected, you may need to contact your ISP (Internet Service Provider) to port forward.

For details on configuring multiple routers, see "Configuring multiple routers" on page 103.

Step 2: Enter your router settings

1. Under the Router drop-down list, select the model of your router.
   OR
   • Click the **Search** button ( ) to enter the name of your router model.

   NOTE: Click the **Auto Detect** button ( )if you have a Linksys or Netgear router (works with most Linksys or Netgear models).

Figure 25.10 Router settings window.

2. Under Router IP, click the **Detect Router IP** button ( ).
   • The router's IP populates in the blank field. Click **OK** to exit the prompt.
3. Under Username and Password, enter ***the router's*** username and password.
   • Optional: Under HTTP Type (default http://) and HTTP Port (default, 80), you may have to change the values depending on your router model. Consult your router manual for details.

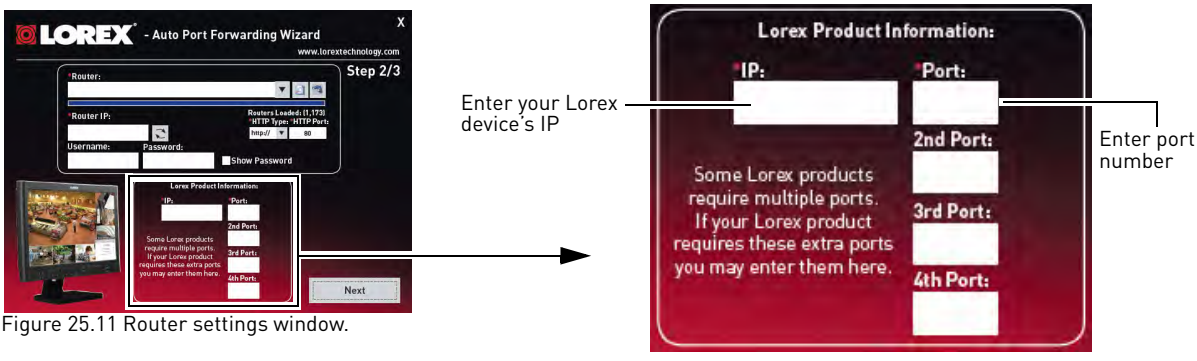

Lorex Product Information:
IP:
Port:
2nd Port:
3rd Port:
4th Port:
Some Lorex products require multiple ports. If your Lorex product requires these extra ports you may enter them here.
Enter your Lorex device's IP
Enter port number

Figure 25.11 Router settings window.

4. Under IP, enter the IP address of your Lorex device.
   • To find your system IP, exit to the main viewing mode, and then press the **INFO** button on your remote, or press the **RETURN** button on the front panel of the system.
5. Under **Port**, enter the Web Port (**80**). Under **2nd Port**, enter the RTSP port (**554**).
6. Click **Next** to continue.

Step 3: Update the router settings

1. Click the **Update Router** button.
   - You will see your router window open. The Auto Port Forwarding Wizard automatically populates your router with the relevant information. This will take a few moments.

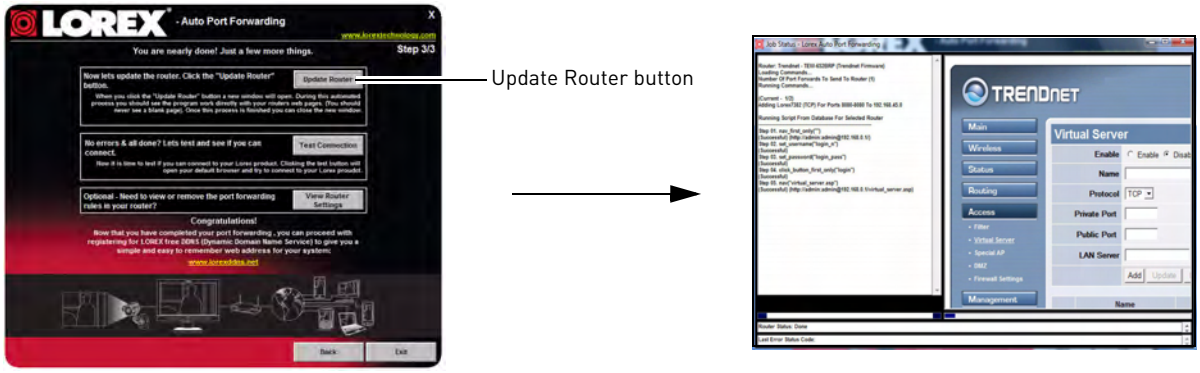


Figure 25.12 Router settings window.

2. Close the update window when the update finishes.

Step 4: Test your connection

1. Click the **Test Your Connection** button.
   - Your system's default browser opens and connects to your **Lorex device**.

   NOTE: Ensure that Internet Explorer is your system's default internet browser.

   NOTE: A window opens that prompts you to enter in your **DVR's** user name and password (do not enter your DDNS log in information).

   NOTE: ActiveX warnings may appear. Accept all ActiveX installation warnings to connect to your system. For details, see "Logging into Web Remote Viewer" on page 61.

Configuring multiple routers

Your network may have two or more connected routers. During the initial launch of the auto port forwarding wizard, the program scans the network to detect the number of connected routers.

To check for multiple routers:

1. Click the **Detect Multiple Routers** button ( ).
   - A list of connected router populates in the window.

LOREX - Auto Port Forwarding
LOREX - Detect Multiple Routers
Number Of Routers Detected
2
Check now
"2" indicates two routers have been detected

Figure 25.13 Router settings window.

- The "Possible 1st Router" refers to the router directly connected to your system. This is the router that requires the port forward information.
- The "Possible 2nd Router" refers to the router immediate to the internet connection. This is the router that requires you to configure a DMZ host connection.

Scenario A: Router/Modem combination + Router

- You may have a router/modem combination, with a second router in your network.

Scearnio B: Multiple Routers

- You may have two routers in your network.

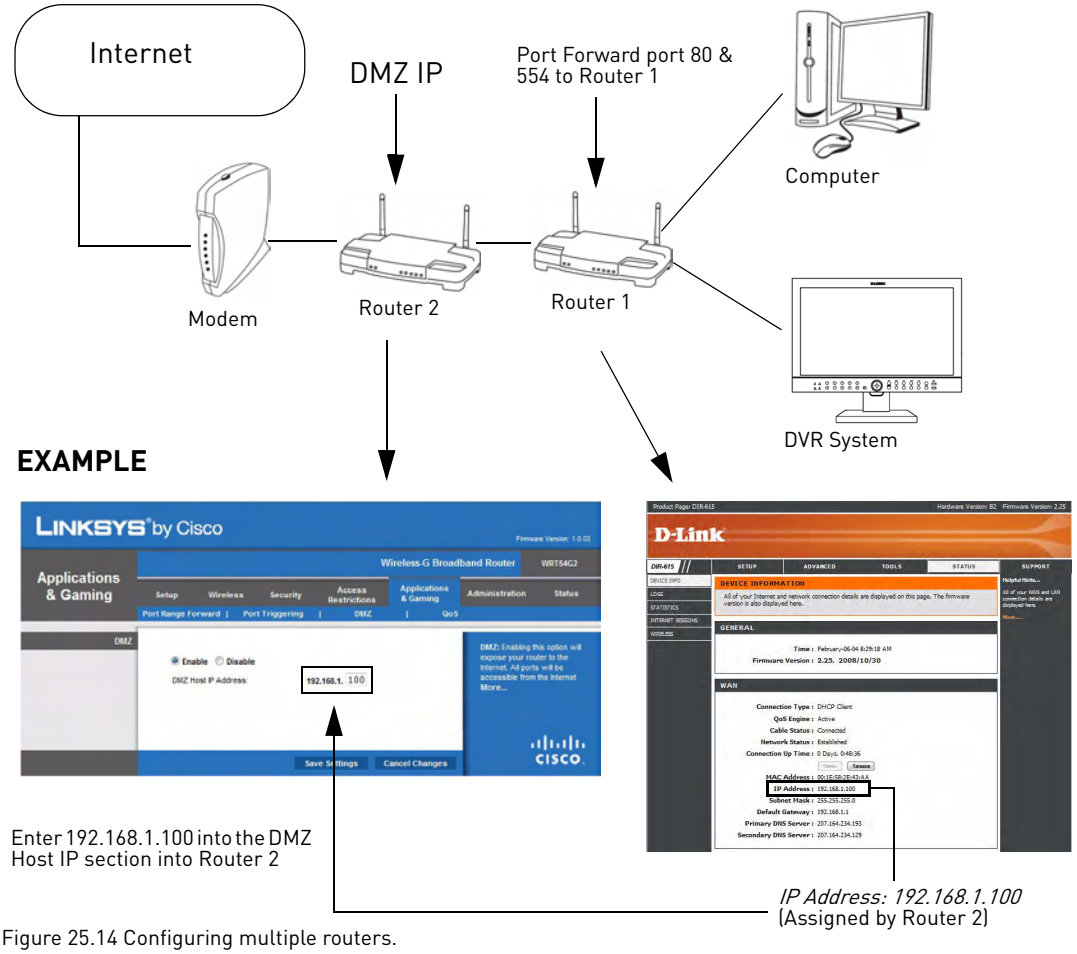


Figure 25.14 Configuring multiple routers.

In both scenarios, the router that is immediate to the internet connection (Router 2 in illustration) must act as a "bridge" to another router (Router 1 in illustration). The Auto Port Forwarding Wizard must connect to Router 1.

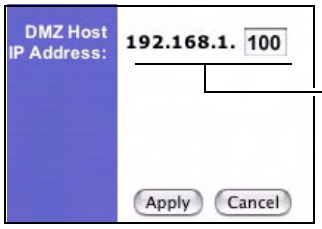
A proper DMZ configuration in Router 2 allows all incoming traffic going through Router 2 to automatically pass to Router 1. Router 2 acts as a "dummy" router and passes all the incoming data onto Router 1. Router 1 is the router that needs the port forwarding information.

Configuring a DMZ host connection

- Connect to "Router 1" on your network (referred to as "Possible 1st Router" in the Auto Port Forwarding Wizard). Obtain the IP address of Router 1. Usually this can be found in the "Status" section of your router menu. The IP should begin with "192.168...."This IP address is your DMZ IP.
- Enter the IP address obtained from Router 1 into the DMZ section of Router 2.
- Once you have configured Router 2 with a DMZ connection, run the Auto Port Forwarding Wizard to begin auto port forwarding to Router 1.
- Consult your router's owner's manual for details on configuring DMZ settings.

Example

DMZ stands for Demilitarized Zone. Enabling a DMZ IP on your router enables one of the routers to pass information onto the second router.



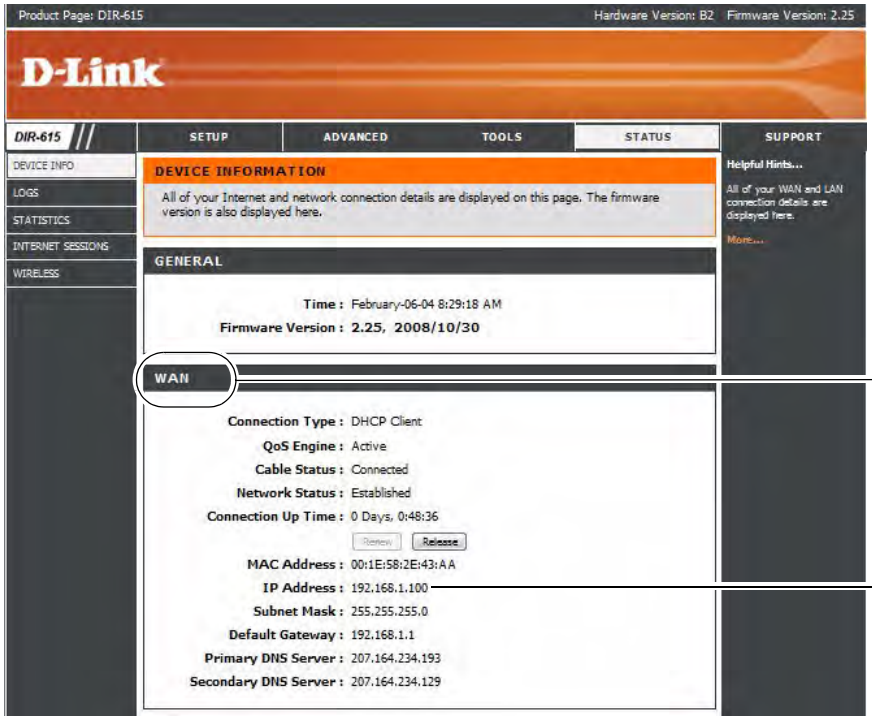
DMZ IP address assigned by a secondary router

Figure 25.15 Entering DMZ information.

Locating your Router IP - The Status Page

The "Status Page" of a router normally includes the router's vital information such as the IP address.

EXAMPLE



The IP information is normally under a header called "WAN" or "Internet Port". Each router has different terminology.

Router IP assigned by the main router. Enter this IP into the DMZ section of the primary router.

Figure 25.16 Router status page.

SETTING UP DDNS SERVICE

Lorex offers a free DDNS service for use with your system. A DDNS account allows you to set up a web site address that points back to your local network. The following outlines how to set up your free DDNS account.

To setup your free Lorex DDNS account:

1. In your browser, go to **www.lorexddns.net** and click **Create Account**.

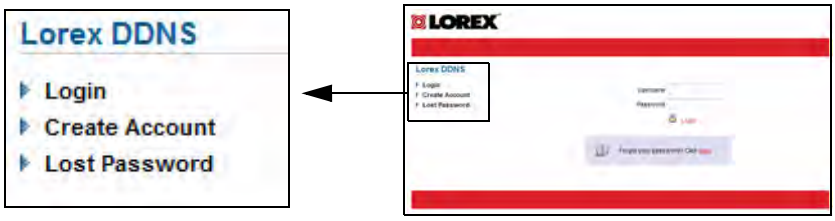


Figure 26.0 DDNS registration.

2. Complete the Account Information fields with your personal information. Complete the Warranty Information with your purchase details (optional).
3. Complete the System Information fields:
   - **Product License (Code)**: Select your product model from the Product License drop down menu.
   - **MAC Address**: The physical address of your system on your network.
   - **URL Request**: Choose a URL for your DDNS connection (i.e. your name, your company or business name, or anything of your choice)

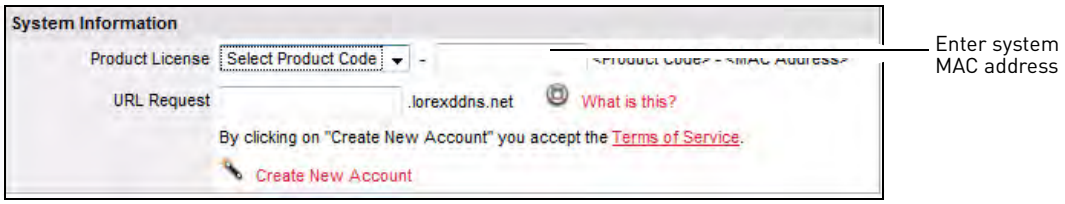


Figure 26.1 Entering system MAC address.

4. Click **Create New Account** to create a new account and save your settings.
5. **Your Account information will be sent to you at the email Address you used in step 2**

You will need this information for remote access to your system. Record your information belov

Username: _ _ _ _ _ _ _ _ _ _

Domain name*: _ _ _ _ _ _ _ _ _

Password: _ _ _ _ _ _ _ _ _ _

* Only the first part of the Domain Name is required for setup on the system. For example, if the full domain sent is *tomsmith.lorexddns.net*, you only need to enter tomsmith on the system.

How Do I Enable DDNS On My System?

Once you have registered for free DDNS service, use the information in the confirmation email to configure DDNS settings on your system.

To open the DDNS on your system:

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.
2. Click SYSTEM SETUP.
   - The System Setup menu opens.
3. Click **SYSTEM**.
   - The System setup window opens.
4. Click the **NETWORK** tab on the left.
   - The Network window opens.

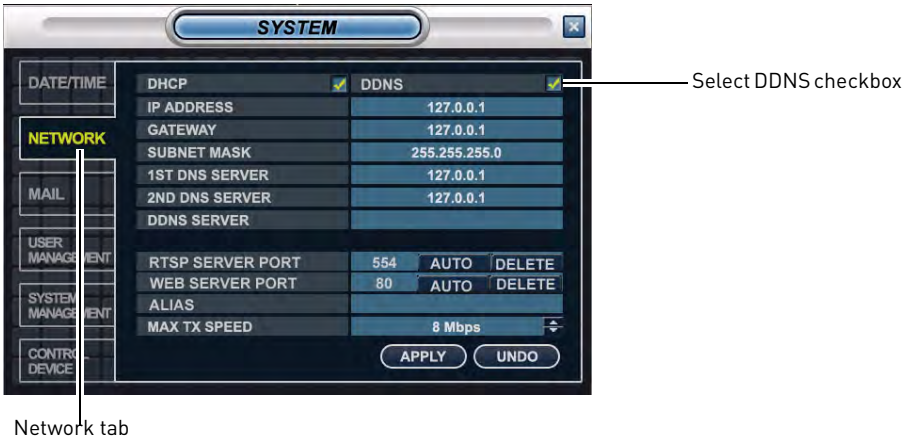


Figure 26.2 System Network tab.

Enabling DDNS & DHCP

You must enable DDNS and and DHCP for remote connectivity.

To enable DDNS & DHCP:

1. Select the **DHCP** or **DDNS** checkbox.
   - Click **APPLY** to save your settings.

With DDNS entered on your system, you can access your DVR from a remote location by entering the Lorex DDNS domain name in your web browser on your computer or mobile device.

Networking Checklist

Use this checklist to confirm you have completed all the steps of the Network Setup.

I have the following:

- High-Speed Internet
- Router (not included)
- Ethernet cable (not included)
- Computer with Internet Explorer 6 or later

☐ *I have turned off the system and performed the following:*

- Connected the Ethernet cable to the back of the system
- Connected the other end of the Ethernet cable to my router

☐ *I have found my System Information:*

- Press the **RETURN** button (↵) on the remote control or front panel of the system.

OR

- SYSTEM SETUP > SYSTEM > SYSTEM MANAGEMENT > **SYSTEM INFORMATION**

☐

My IP Address is: _____

My MAC Address is: _____.

☐ *I have enabled Port Forwarding on my router:*

- **Port 80 & 554**

NOTE: Use the AUTOPORT feature in the system or use the Lorex Auto Port Forwarding Wizard to port forward your router.

- For details on the AUTOPORT button feature, see "Auto Port Forwarding" on page 46.
- For details on the Lorex Auto Port Forwarding Wizard, see "Lorex Auto Port Forwarding Wizard" on page 99.

☐ *I have configured DDNS for remote access to my system:*

Go to **www.lorexddns.net** and create a new account

Domain: _____

User ID: _____

Password: _____

☐ *I have configured my system to connect to the DDNS server:*

ATTENTION: You *MUST* enter your DDNS information *LOCALLY* (in your system's DDNS menu) before attempting remote access.

To enable DDNS on your system:

To open the DDNS on your system:

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.
2. Click SYSTEM SETUP.
   - The System Setup menu opens.
3. Click **SYSTEM**.
   - The System setup window opens.
4. Click the **NETWORK** tab on the left.
   - The Network window opens.
5. Select the **DDNS** checkbox.
   - Click **APPLY** to save your settings.

NOTE: Once you have saved your DDNS settings, you must reset your DVR for the changes to take effect. Disconnect and reconnect the power cable from the rear panel to reset the system.

I can access my system from a remote PC:

☐ To access your system remotely:

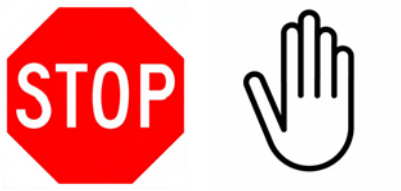
1. Open Internet Explorer and enter your **DDNS address** from the confirmation email. For example, *tomsmith.lorexddns.net*

   NOTE: Remote viewing is compatible with Internet Explorer **only**.
2. Log in using your user name and password (by default, user name: **ADMIN**; password: **1234**).

REMOTE VIEWING ON MOBILE DEVICES

You can access your DVR from your mobile device such as an iPhone™, Blackberry™ or Windows Mobile™.

Before You Begin



Data charges may appear on your phone bill as a result of browsing streaming video.

Always check with your cell phone carrier on how your data plan works. Lorex is not responsible for data plan fees that may result.

You must enable DDNS on your DVR and set up a DDNS account before you can begin viewing video on your mobile device.

- To set enable DDNS on your DVR, see "Setting Up DDNS Service" on page 106.
- To set up a DDNS account on your DVR,see "Network Tab" on page 45.
- Connect to your system by entering the DDNS address of your system into your mobile device's web browser.

Viewing Your DVR From Your iPhone

Once you have enabled DDNS on your DVR, and set up a DDNS address, you can begin live viewing from your iPhone.

Connecting to your system on your iPhone:

1. Touch the Safari icon( ) to start web browsing.
2. In the address bar, enter your DDNS address in full (For example http://tomsmith.lorexddns.net).
   - A login window opens.
3. Enter the system's user name and password (by default ADMIN ; 1234)
   - The Mobile View page opens and automatically connects to channel 1.

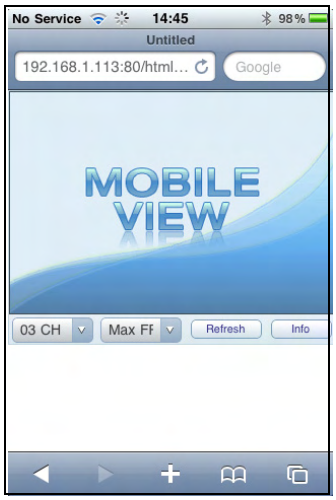


Figure 27.0 Router settings window.

Web Remote Viewer iPhone Interface

Changing Channels

1. Touch the channel drop-down menu to access a list of channels.
2. Touch a channel (ie. 03 CH) to switch channels.
   • A checkmark appears beside the selected channel.
3. Touch the **Done** button to exit.

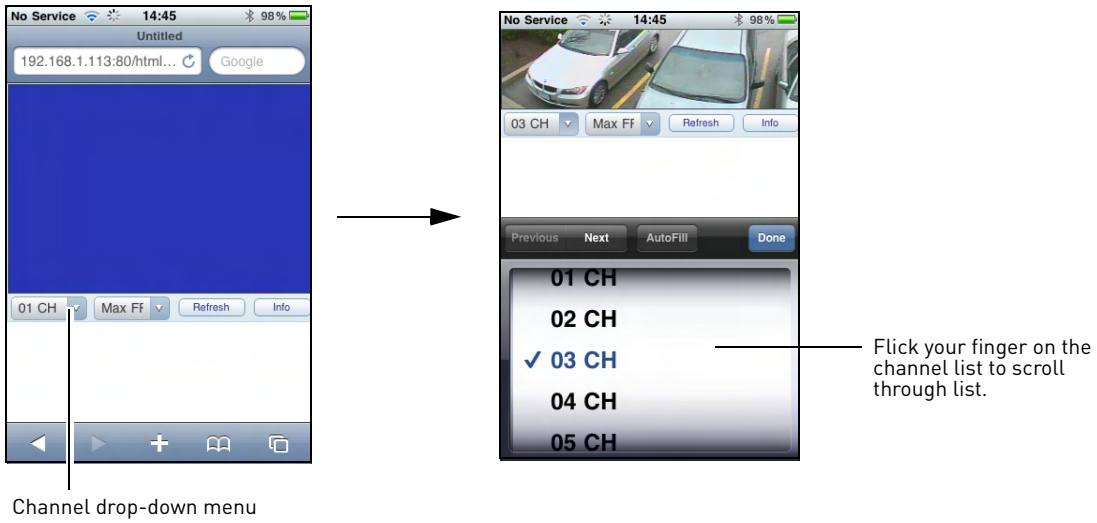


Figure 27.1 Web Remote Viewer iPhone interface.

Adjusting Video Frame Rate

1. Touch the frame rate drop-down menu to access a list of frame rates.
2. Select a desired frame rate.
   • A checkmark appears beside the selected frame rate.
3. Touch the **Done** button to exit.

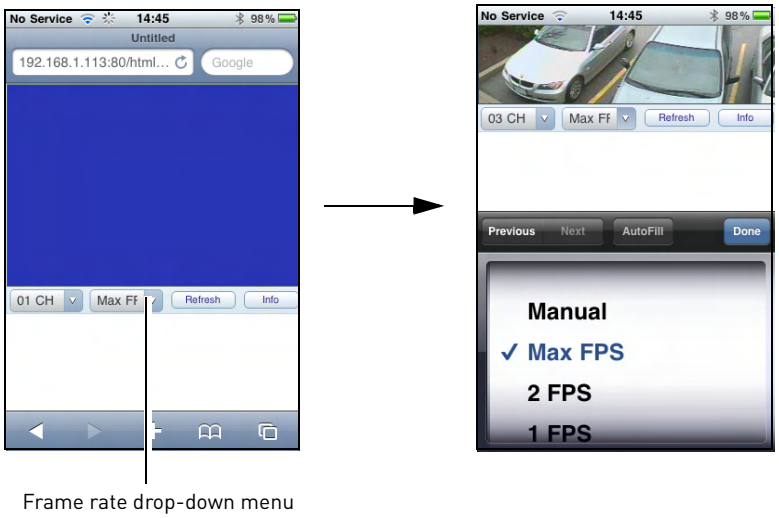
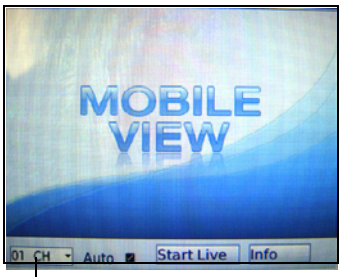


Figure 27.2 Adjusting channel frame rates.

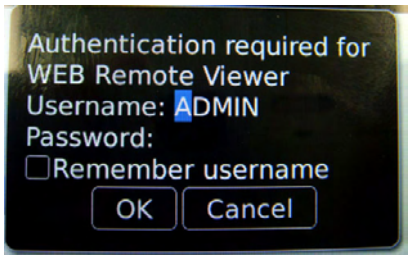
Viewing Your DVR From Your 3G Blackberry

To begin live viewing from your Blackberry:

1. Open your web browser, and enter in the DDNS address of your DVR. The Mobile Viewer page opens.



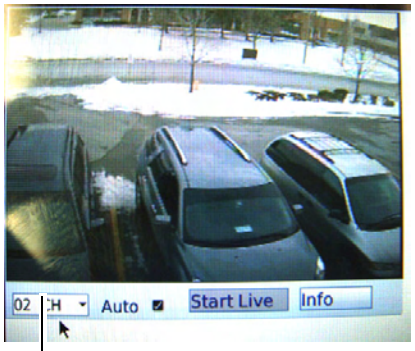
Channel list drop-down menu



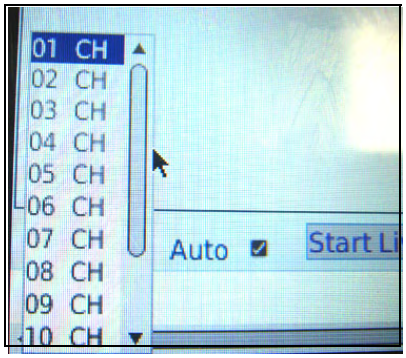
Enter in your username and password and click OK.

Figure 27.3.Blackberry Web Remote Viewer login.

2. Enter in your DVR user name and password when the authentication window appears. Click **OK**.
3. Click the channel list drop-down menu to view a list of DVR channels.



Channel list drop-down menu



Close up view of channel list.

Figure 27.4 Channel selection on Web Remote Viewer.

NOTE: The **Auto** checkbox refers to auto-refreshing of images. Leave this option selected.

Viewing Your DVR From Your Windows Mobile device

To begin live viewing from your Windows Mobile device:

1. Open the Opera web browser, and enter in the DDNS address of your DVR.

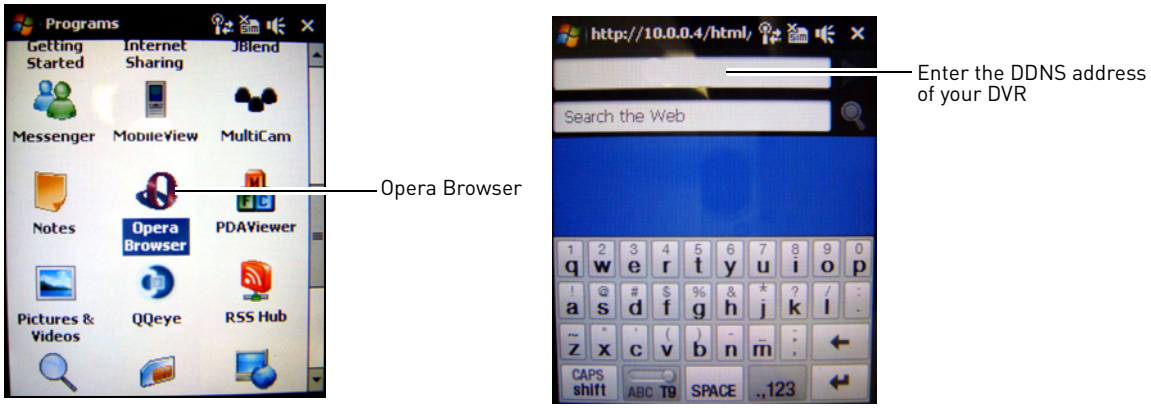


Figure 27.5 Launching Web Remote Viewer on Windows Mobile.

2. Enter in your DVR user name and password when the authentication window appears.
3. Click **OK** to log in to the system.

Figure 27.6 Web Remote Viewer, full view in Windows Mobile.

4. Use the stylus to navigate the system menus. Navigation is identical to accessing the system through Internet Explorer.

APPENDIX A: SYSTEM SPECIFICATIONS

SYSTEM	
Operating System	Linux (embedded)
Pentaplex	Simultaneous View, Record, Playback, Backup & Remote Monitoring
Number of Channels	4 Channel
Inputs / Outputs	
Video IN	4 x 1Vp-p, CVBS, 75ohms, BNC
Video Out	BNC
Spot Out	BNC
DVI OUT	DVI to VGA converter included
Audio IN	1 Line in(RCA), CODEC:G.711
Audio Out	1 line out(RCA), CODEC:G.711
USB Port	2 - front & back
Alarm IN	4 x TTL, programmable as NC/NO
Alarm Out	1 x Relay with NO/NC contact; 24VDC/2A, 120VAC/2.0A resistive
PTZ control	RS485
Keyboard Control	RS485 compatible
Display	
Live Display	1 or 4
Live Display Speed	120/100 fps (4ch)
OSD	ON/OFF
System Navigation	USB Mouse, Remote Control, Front Panel, Virtual Keyboard control, Quick Setup
Border Color	ON/OFF
Sensitivity Levels	10

Motion Area Setting	Adjustable grid (11 x 8), 10 steps sensitivity level
Firmware Upgrade	Via USB Device
Configuration Export & Import	Via USB
User Authority	ADMIN/MANAGER/USER
Audio	2-way Audio Conference (via nework)
RECORDING	
Video Compression	H.264
Audio Compression	G.711
Recording Speed	120/100 fps (CIF), 60/50 fps (2CIF) (4 Ch)
Recording Resolution	120/100 (NTSC/PAL) @ 352x240 (CIF) 60/50 (NTSC/PAL) @ 704x 240 (2 CIF) 30/25 (NTSC/PAL) @ 704x 480 (D1)
Recording Resolution Setting	By each camera for different resolution setting (CIF/2CIF/D1)
Recording Quality Control	4 levels (low/standard/high/highest)
Image Size	2-3 Kbyte (352x240), 4-9 Kbyte (704x240) 5-15 Kbyte (704x480)
Recording Schedule	By hour, by day, by recording mode, by alarm, by Ch
Pre Recording	Max. 5 seconds
Post Recording	Max. 180 seconds
Alarm Recording	Programmable per camera
Panic Recording	Overrides all other recording settings to provide the best quality recording
S.M.A.R.T Alarm	HDD Health Check
Reliability	Watch-Dog, Auto-recovery after power failure
Convert Video	Yes
PLAYBACK	
Playback Channel	1,4 (4ch)

Instant Playback	Instant playback mode for quick review of log events
Playback Speed	Variable playback (Max. 64x)
Playback Players	Backup Player, Windows Media Player (after installing the codec)
Calendar Search	Search by time
Event Search	Search by event
Log Search	Up to 1000 for user login/out, configuration changes, remote access, connects/disconnects
Audio Play	Synchronized with video
STORAGE & ARCHIVE	
Storage	Up to 1 HDD's (SATA)
Maximum Capacity	Up to 2TB
Backup Media	USB (flash drive & HDD)
Backup File Format	AVI file (Codec included)
Watermark	Watermarked video & audio for security
CONNECTIVITY	
Easy Connect	1. Built-in Auto Port Forwarding (UPnP router required) 2. Lorex Auto Port Forward Wizard
Software	Web browser
Supported Operating Systems	Windows™ XP, Vista, 7 and Apple Mac (via Safari browser)
Browsers	I.E.: Multi channel viewing playback and configuration. Mozilla Firefox, Safari, Google Chrome: Selectable single channel live viewing & configuration
Email Notification	Text with web link
Mobile Connectivity	Blackberry™, iPhone™, Windows Mobile™ 6.0 and above Smart phones (via Opera browser)
DDNS	Free Lorex DDNS
System Configuration	Full setup configuration over network
Bandwidth Limit	Limitable network bandwidth by user

Web Server Port	Programmable by User
Network Protocol	LAN, DHCP, Dynamic IP, DDNS
Network Interface	10/100-Base-TX, RJ-45
Network Speed Control	8 levels (56Kb ~ 8MB)/sec.
GENERAL	
Power Consumption	Approx. 18 watts
Supply Voltage	100VAC-240VAC, 12VDC , 3.3A, 50/60Hz
Unit Dimensions (W x D x H)	11.4" /290mm x 8.3"/211mm x 2.3"/60mm (W X D X H)
Unit Weight (KGs)	1.6 kg/3.5 lbs
Operating temperature	0° ~ 40° C
Humidity	10 ~ 90% NC

As our products are subject to continuous improvement, Lorex Technology Inc. and its subsidiaries reserve the right to modify product design, specifications, and prices without notice and without incurring any obligation. E&OE

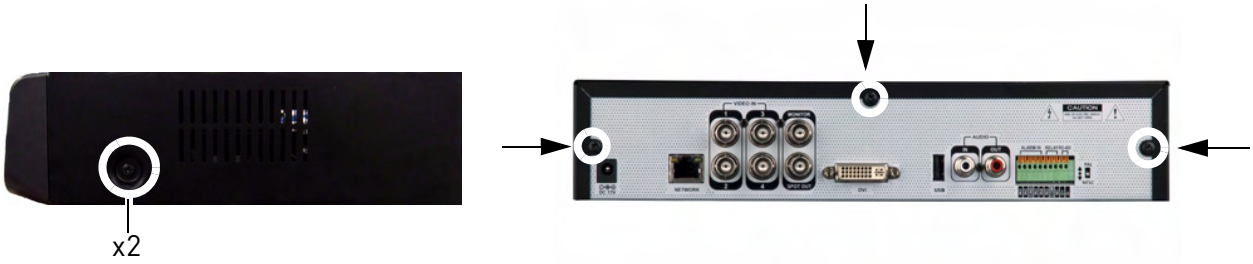
APPENDIX B: REPLACING THE HARD DRIVE

The system comes with a pre-installed 3.5" SATA hard drive. Make sure that the system is OFF and the power cable has been disconnected before changing the hard drive.

> Ground yourself before opening the system. Work on a carpet-free surface. Static electricity damages electronic parts and hard drives.

Removing The System Cover

1. Remove the screws on the side and rear panel of the system.

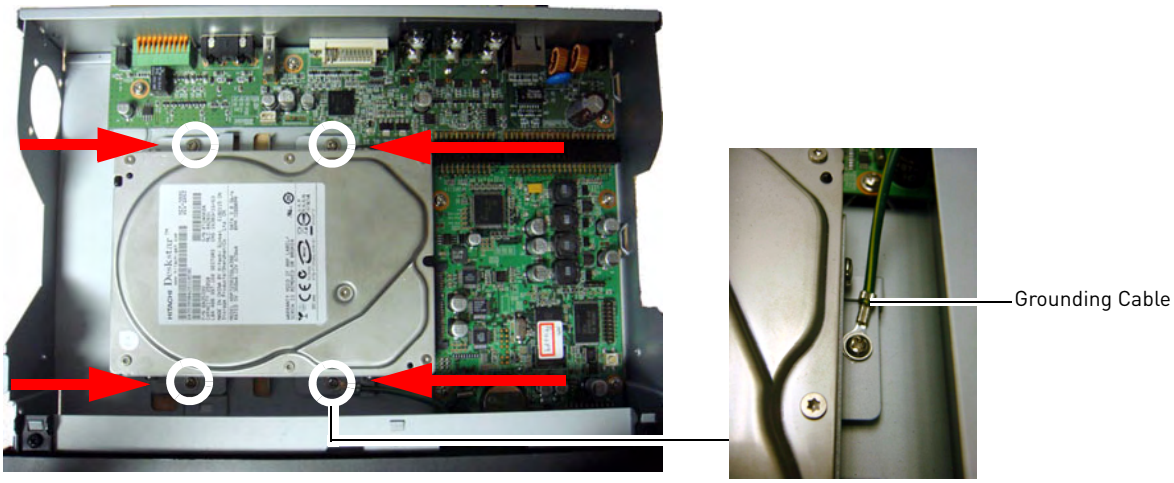


2. Slide the system cover all the way back and gently lift the cover.

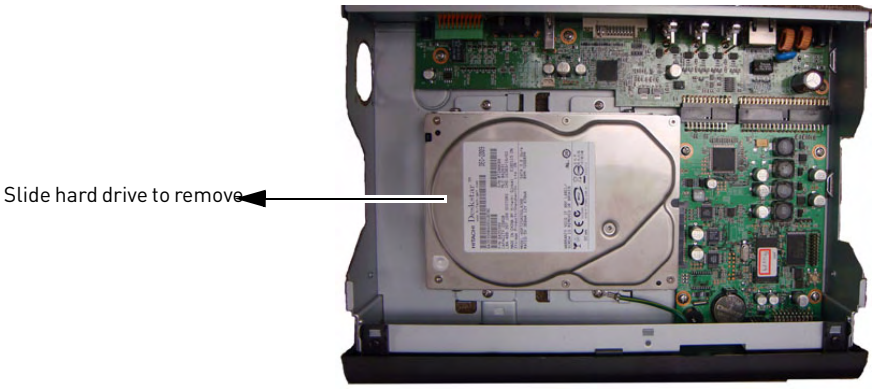
> Be careful of sharp edges when removing the system cover!

Removing The Hard Drive Bracket

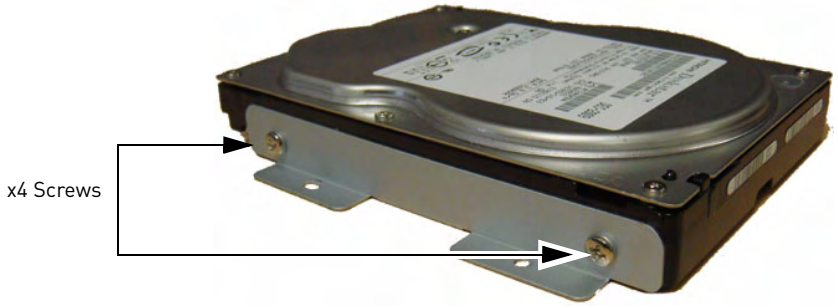
1. Remove the four (4) silver screws to loosen the hard drive bracket.



2. Gently slide the hard drive bracket to remove it from the SATA connector.

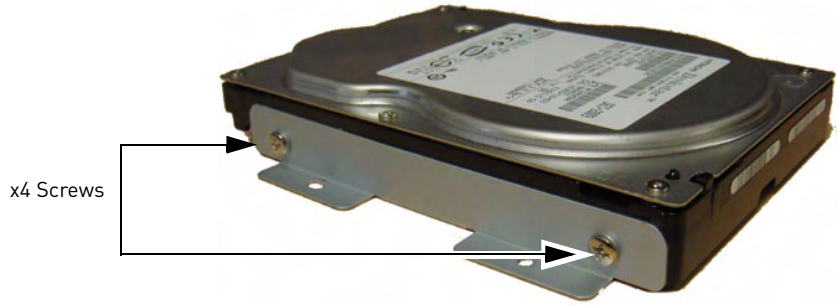


3. Unscrew the four (4) silver screws to remove the bracket from the hard drive.

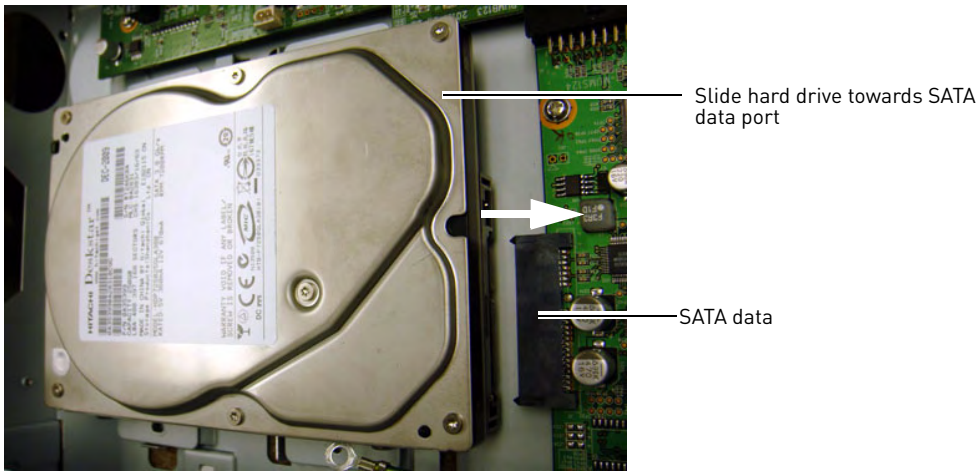


Replacing The Hard Drive

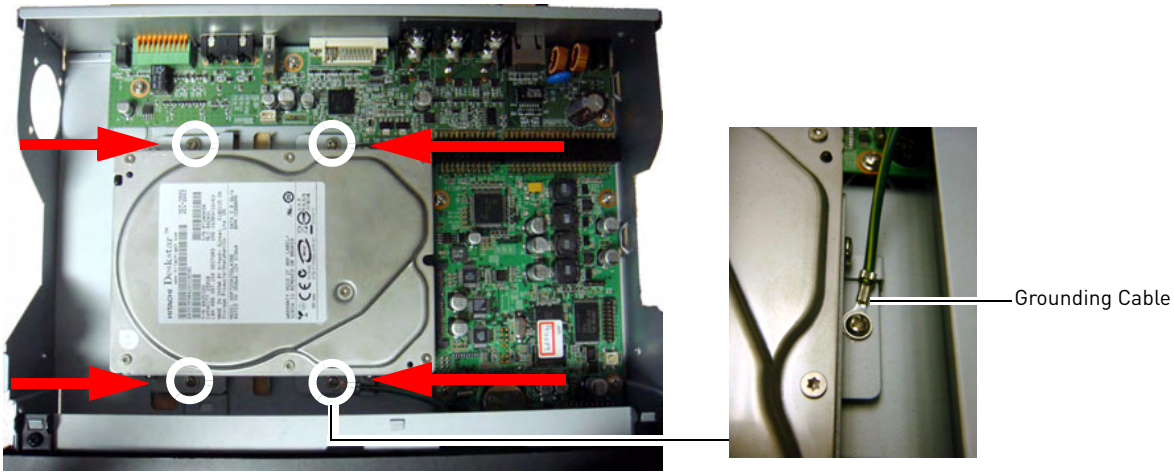
1. Install the two mounting brackets onto the new hard drive using the four silver screws.



2. Slide the hard drive (with the mounting bracket installed) into the SATA data port until the hard drive locks in place.
   - Orient the hard drive so that the SATA data port faces towards the SATA data port on the system board.



3. Secure the mounting bracket onto the chassis using the four (4) silver screws.
   NOTE: Secure the grounding cable onto the mounting bracket.



Formatting The Hard Drive

Format your new hard drive so that the system properly detects it.

To format your hard drive:

1. Right-click anywhere in the main viewing window.
   - The quick-menu opens.
2. Click SYSTEM SETUP.
   - The System Setup menu opens.
3. Click **DISK MANAGEMENT**.
   - The Disk Management window opens.

4. Beside FORMAT, click the **START** button.
   - The Login window opens.
5. Enter in your user name and password and then click **OK**.
   - A warning window opens.

6. Click **YES** to format your hard drive.
   - Wait for the system to erase the hard drive. The system restarts automatically once the formatting process completes.

Formatting a hard drive permantely erases all data. This cannot be undone.

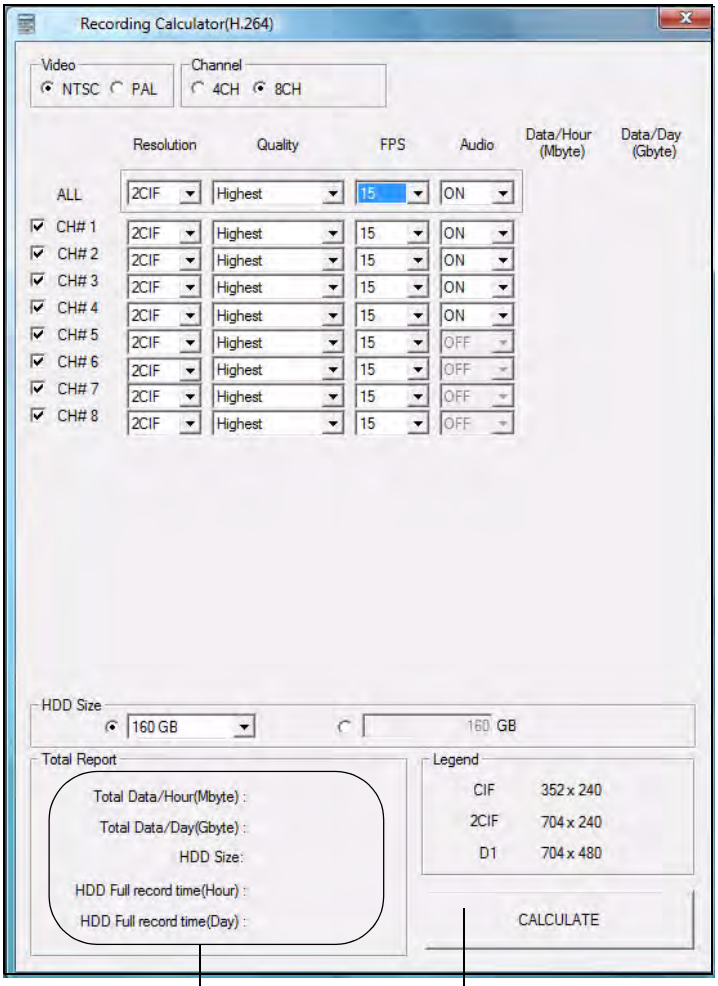
APPENDIX C: USING THE STORAGE CALCULATOR

The Storage Calculator software calculates the amount of recording time available on your hard drive, based on the System Recording Settings. This software is located on the CD included with your system.

1. Select the settings to reflect the options you have chosen on your system:

   - **Channel:** Select the number of channels your system has (4CH, 8CH, 16 CH).
   - **CH1~CH8:** Select the channels to include in the Recording Calculation.
   - **Resolution:** Set the recording resolution to CIF (352x240), 2CIF (704x240) or D1 (704x480).
   - **Quality:** Set the recording quality to Highest, High, Standard, Low.
   - **FPS (Frames Per Second):** Set the Frames Per Second for the recording to 1, 2, 3, 7, 15 or 30 FPS.
   - **Audio:** Set the Audio Recording selection to ON or OFF (if audio is being recorded on the system).
   - **HDD Size:** Select the size of the system hard drive.

2. Click the **Calculate** button.
   - The software populates the results of your system's recording time.



APPENDIX D: ENABLING E-MAIL NOTIFICATIONS

This system has the ability to automatically send email notifications when an event is detected (i.e. motion event).

NOTE: These instructions rely on the Lorex DDNS email server to send out email notifications. If you wish to enable email notification using your own custom email server settings, see "Mail Tab" on page 46.

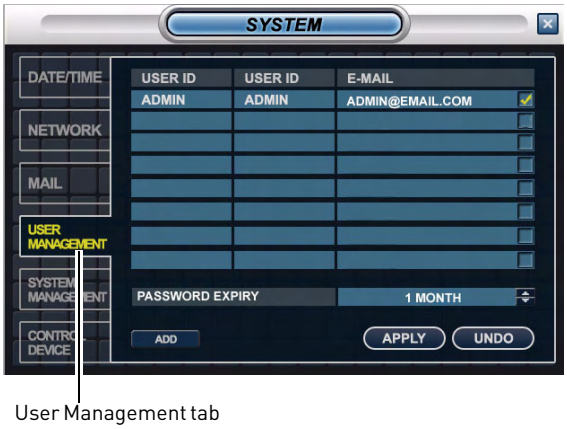
Step 1: Connect Your System To The Internet

1. Connect an ethernet cable to the Ethernet port on the rear panel of the system. Connect the other end of the ethernet cable to a router that is connected to the internet.
2. Ensure that DHCP and DDNS is enabled on your system (ON by default):
   a. Right-click anywhere in the main viewing window.
   b. Click SYSTEM SETUP
   c. Click **SYSTEM**.
   • The System setup window opens.
   d. Click the **NETWORK** tab on the left.
   • The Network window opens.

   e. Click the DHCP and DDNS checkbox to make sure the checkboxes are selected.
   f. Click **APPLY** to save your settings.

Step 3: Select Users

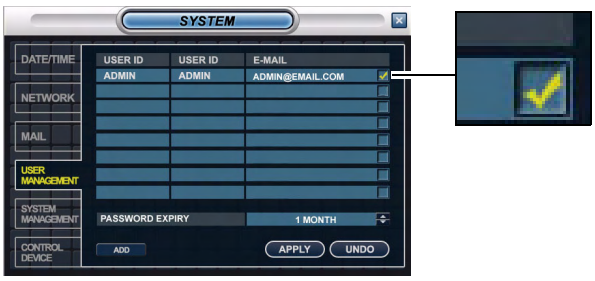
1. Click the **USER MANAGEMENT** tab on the left.
   - The User Management window opens.



2. Under USER ID, double-click the user you wish to modify (ADMIN, USER or MANAGER).
   - The Edit window opens.

3. Double-click the blank field beside E-MAIL.
   - The Virtual Keyboard opens.
4. Enter the desired email you wish to receive notification emails.
5. Click **OK** to save your settings.
6. Beside E-MAIL NOTIFICATION, click to select **ON**.
7. Click **OK** to save your settings.

NOTE: Ensure the EMAIL checkbox is selected.



Step 4: Enable The Default E-Mail Server

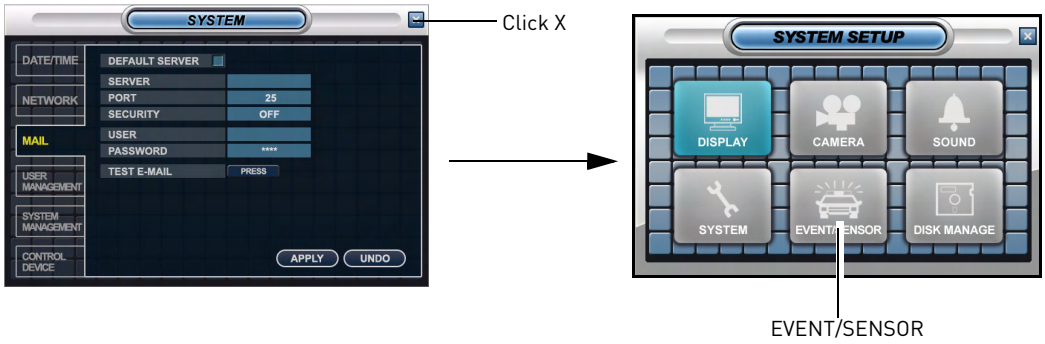
1. Click the **MAIL** tab on the left.
   - The Mail window opens.
2. Select the DEFAULT SERVER checkbox.
3. Click **APPLY** to save your settings.
4. Beside TEST E-MAIL, click the **PRESS** button.
   - A test e-mail is sent to the e-mail address entered in "Step 3: Select Users".

   NOTE: Please wait for several minutes before a test e-mail to be sent. Double-check your "Spam" folder in your e-mail for the test message.

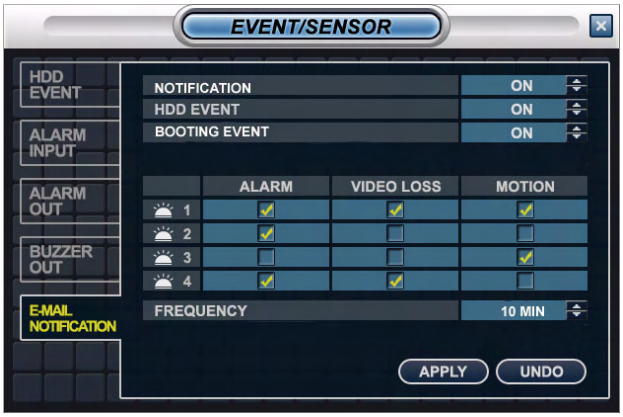
Step 5: Select Event Type

Next, select the event type that you wish to trigger an email notification. For example, you may only want all Motion events to trigger an email notification.

1. Click the "X" on the top-right corner of the window to return to the main menu.



2. Click **EVENT/SENSOR**.
3. Click the **E-MAIL NOTIFICATION** tab on the left.
   - The E-mail Notification window opens.



Behavior Settings

To configure behavior settings:

1. Under NOTIFICATION, select **ON**.
2. Under HDD EVENT, select **ON/OFF**. If ON, the system will send an email notification when an error occurrs in the internal HDD.
3. Under BOOTING EVENT, select **ON/OFF**. If ON, the system will send an email notification when the system restarts (powers on/off).

Action Settings

Set event triggers for each channel.

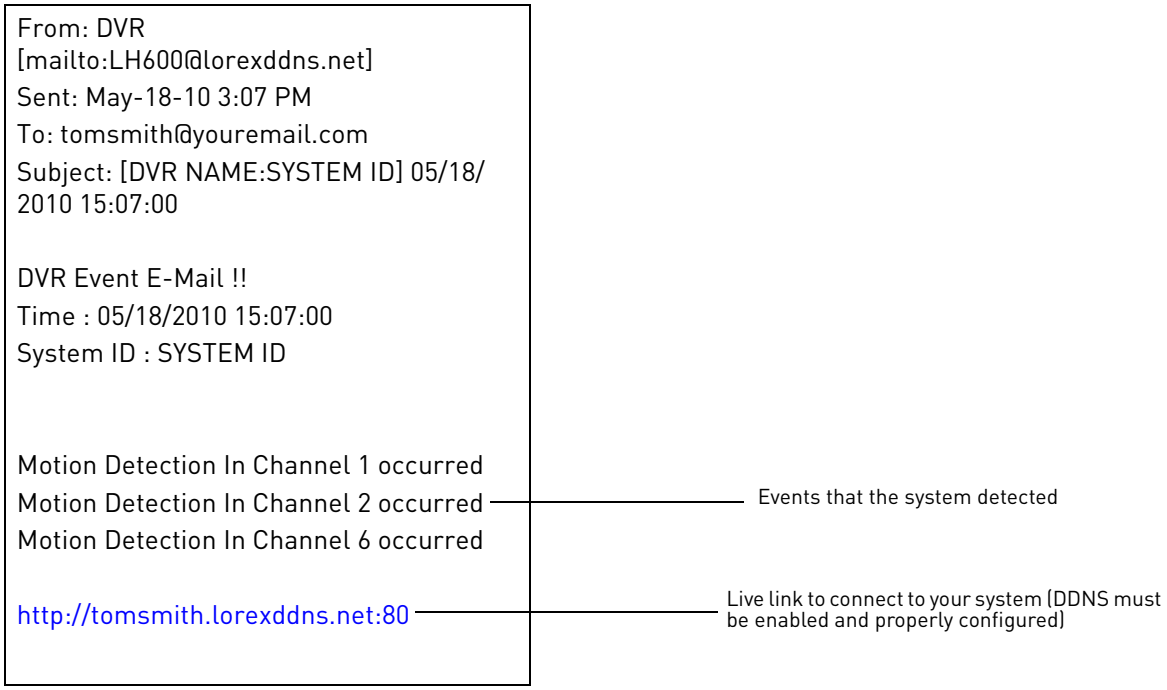
To configure action settings:

1. Set the following:
   - **ALARM**: Select the box to enable e-mail notifications when an alarm input is triggered
   - **VIDEO LOSS**: Select the box to enable e-mail notifications when video loss occurs on the system
   - **MOTION**: Select the box to enable e-mail notifications when motion is detected on the system
2. Under FREQUENCY, select the time interval that the system sends email notifications.
   - Click **APPLY** to save your settings.

Reading Received E-Mails

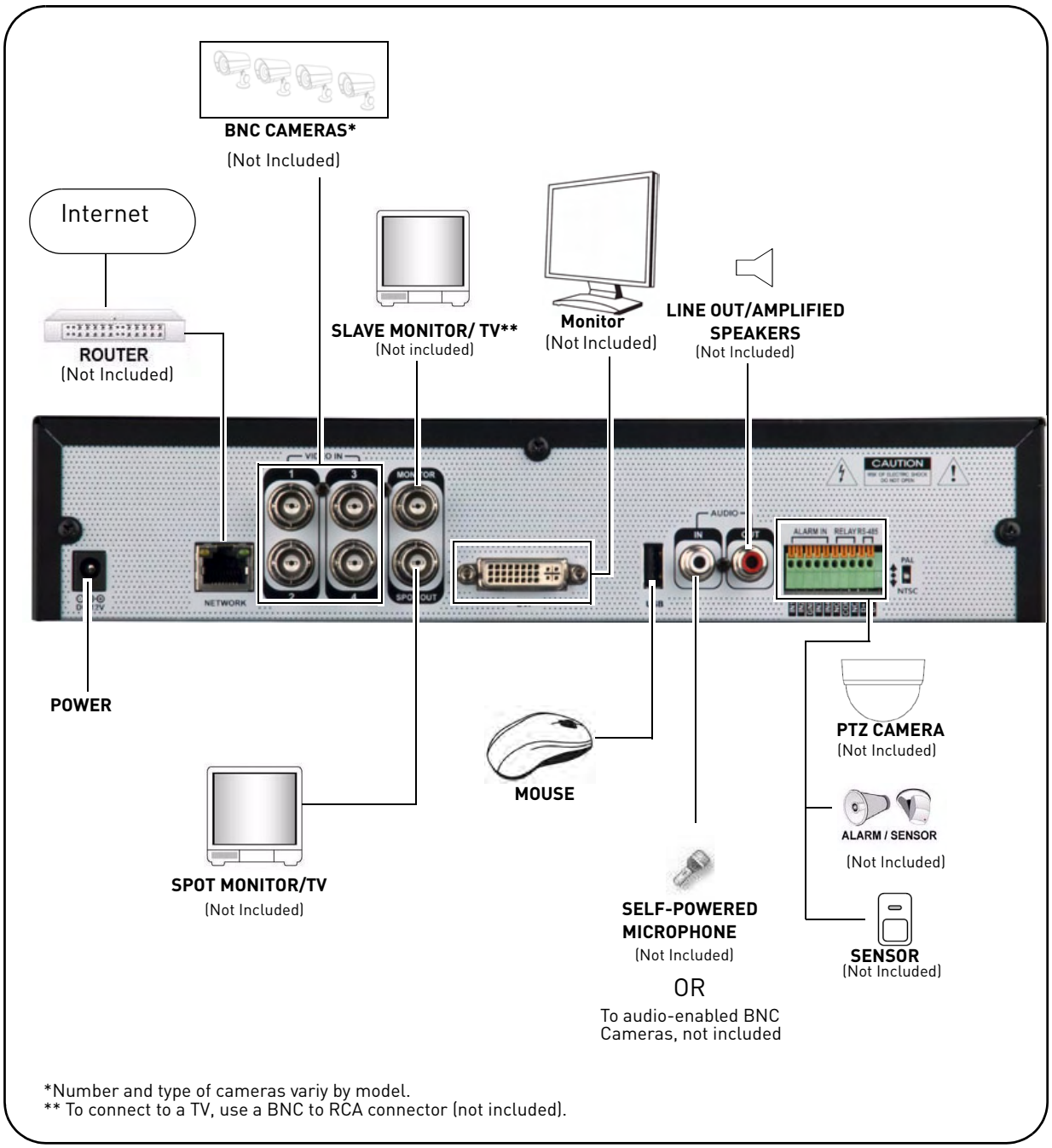
When the system detects an event, such as a motion or alarm event, a notification email is automatically sent to your email.

Example of a system notification email


From: DVR
[mailto:LH600@lorexddns.net]
Sent: May-18-10 3:07 PM
To: tomsmith@youremail.com
Subject: [DVR NAME:SYSTEM ID] 05/18/2010 15:07:00
DVR Event E-Mail !!
Time : 05/18/2010 15:07:00
System ID : SYSTEM ID
Motion Detection In Channel 1 occurred
Motion Detection In Channel 2 occurred
Motion Detection In Channel 6 occurred
http://tomsmith.lorexddns.net:80
Events that the system detected
Live link to connect to your system (DDNS must be enabled and properly configured)

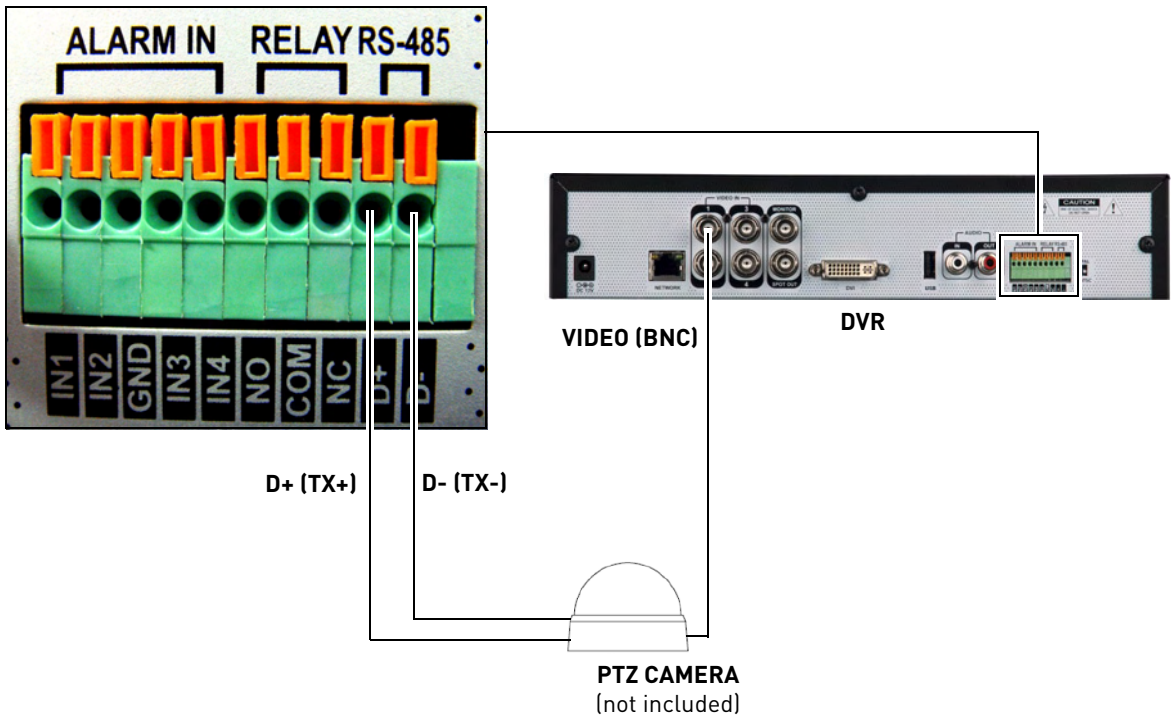
APPENDIX E: FULL CONNECTIVITY DIAGRAM

The following diagram outlines a general set of connections available with the DVR.



APPENDIX F: CONNECTING PTZ CAMERAS

You can connect a RS-485 PTZ camera (not included) to the PTZ Control Block on the rear panel of the system.



Connecting a PTZ camera (not included)

To install a PTZ Camera:

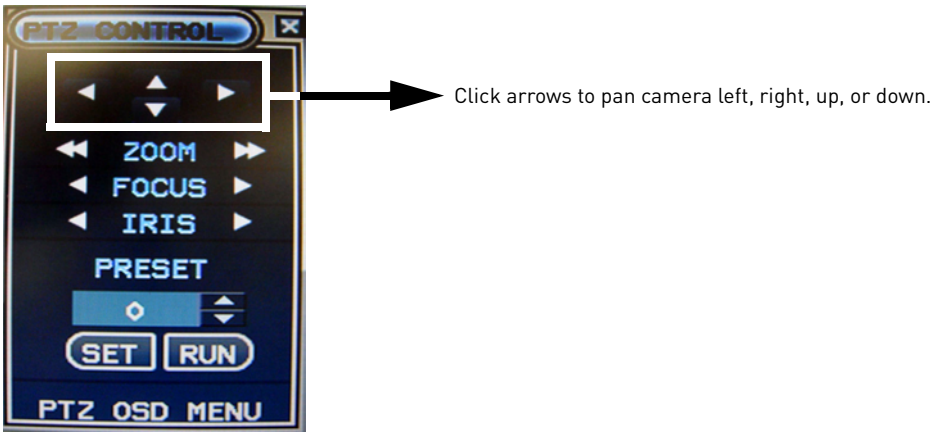
1. Connect the Transmit Cable to the **RS-485 D+ (TX+)** port of the PTZ block on the rear panel.
2. Connect the Receive Cable to the **RS-485 D- (TX-)**port of the PTZ block on the rear panel.
3. Connect the video cable to a BNC port (usually channel 1).
4. Open the **SYSTEM SETUP** menu and select **CAMERA**.
5. Select **PTZ SETUP** and configure the **ADDRESS**, **PROTOCOL**, and **BAUD RATE** of your PTZ camera.

   NOTE: The PTZ camera settings depend on the type of PTZ camera. Please refer to the specific camera manual for your brand and model of PTZ camera.
6. Select **APPLY** and press **ENTER** to save your settings.

Controlling the PTZ Camera

To control the PTZ camera:

1. Double-click on the channel with the PTZ camera.
2. Right-click in the main viewing mode to open the quick menu.
3. Click on **PTZ**.
   - The PTZ menu opens.



4. Configure the following:
   - **Zoom**: Click the arrows to zoom in / out of the image.
   - **Focus**: Click the arrows to improve image focus.
   - **Iris**: Click the arrows to increase or decrease the camera iris. The camera iris controls the amount of light that passes through the camera lens. Increasing the iris improves image brightness.

Configuring Pre-sets

A pre-set allows you to quickly move the camera to a pre-assigned location. For example, you can have the camera point to the main hallway in pre-set 1. Then, you can have a camera point to the main entrance in pre-set 2.

To configure camera pre-sets:

1. Move the camera to the position you would like the first pre-set. Configure the Zoom, Focus and Iris settings if desired.
2. Under PRESET, select a pre-set number (1~255).
3. Click the **SET** button.

Running Pre-sets

- Select the pre-set number, and then click the **RUN** button. The camera automatically pan/tilt/zooms to the pre-set position.

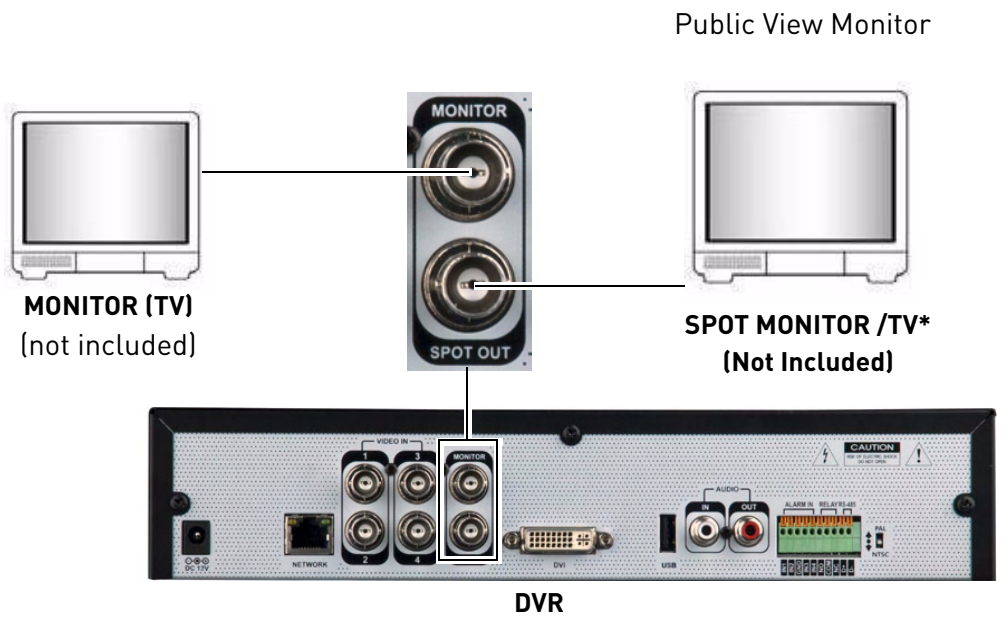
APPENDIX G: CONNECTING ADDITIONAL EXTERNAL MONITORS

Spot Out

The Spot out port displays the camera channels in sequence. You can change the dwell time of the sequence in the Display menu (see "Camera" on page 40, under sub section "Monitor Tab"). This is useful for a monitor in public view: you can make people aware that they are being watched.

Monitor Out

Use the Monitor Out port to connect an external monitor. Monitor Out mirrors the entire screen image of your system. This is useful if you need to monitor the system from a second location (e.g. a back office).



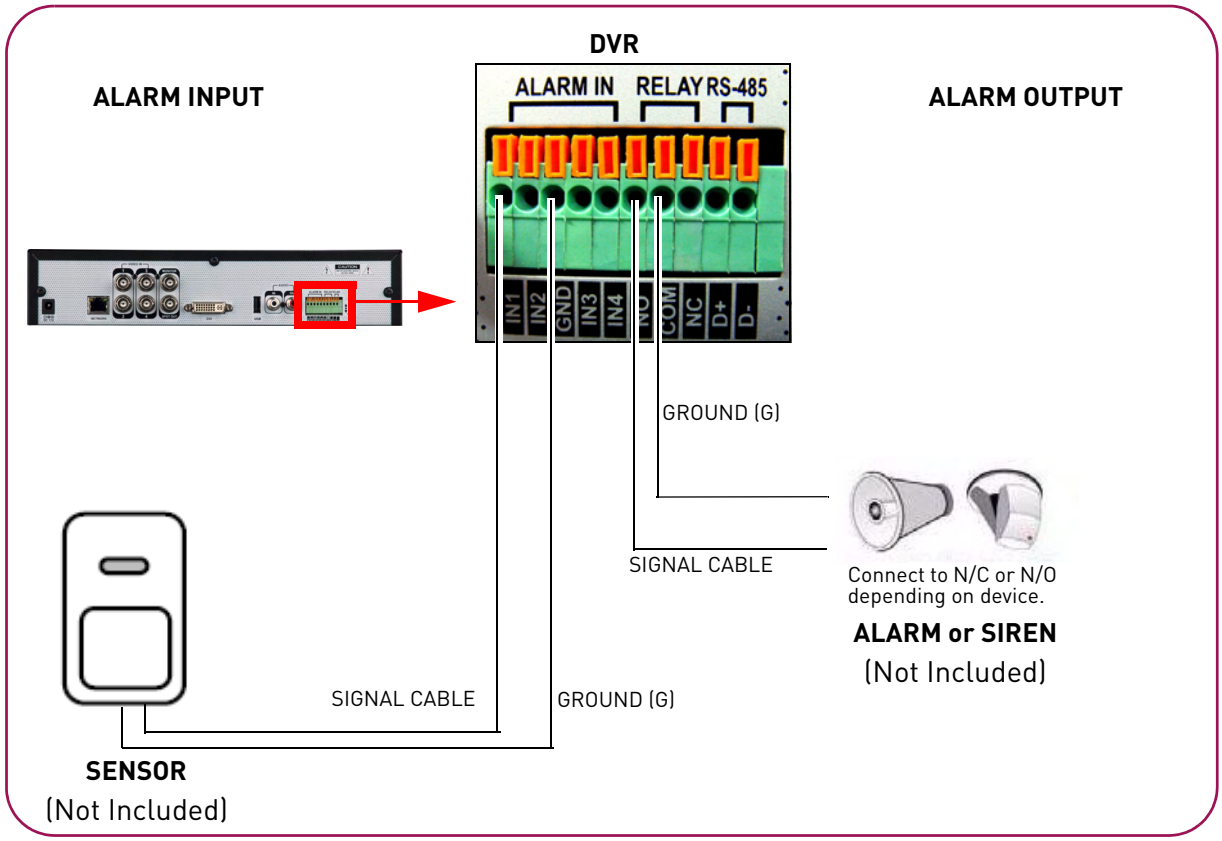
* To connect to a TV, use a BNC to RCA connector (not included).

APPENDIX H: CONNECTING MOTION / ALARM DEVICES

You can also connect external alarm input and alarm output devices to the system (i.e. motion sensors, door/window sensors). Use a motion detector or sensor to send a signal to the system to begin camera viewing and recording on the matching camera channel (when enabled in the Menu); simultaneously, the system sends an output signal to a device such as an alarm or siren.

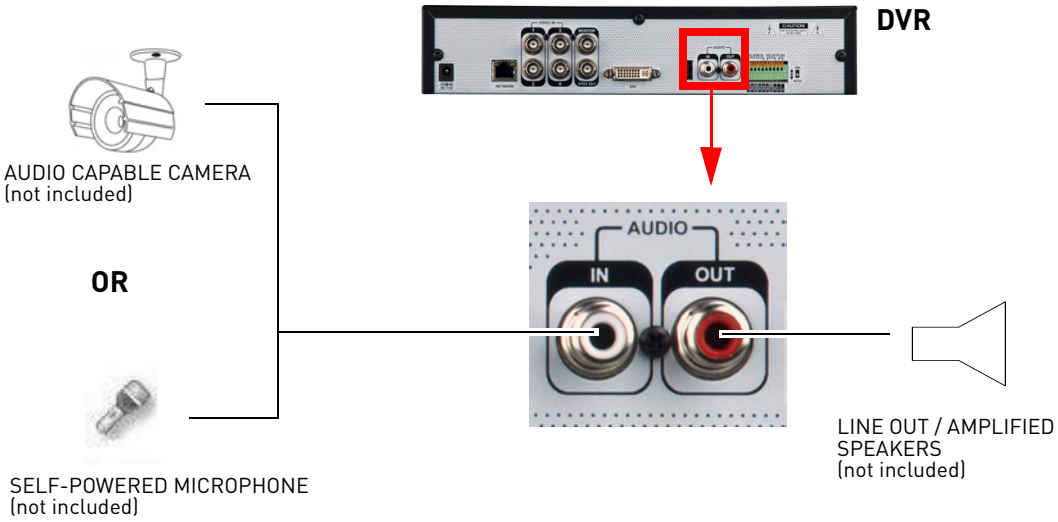
To connect an external sensor/alarm to the system:

1. Connect the Signal Cable to the desired **Channel number + port** in the ALARM IN block.
2. Connect the Ground cable to the **Ground port (G)** in the ALARM IN block.
3. Open the **SYSTEM SETUP** menu and select **EVENT/SENSOR**.
4. Select ALARM INPUT / ALARM OUTPUT and configure the following:
   - **OPERATION**: Select **ENABLE** for the corresponding alarm channel
   - **TYPE**: Select **N.C.** (Normally closed) or **N.O.** (normally open) depending on your alarm/sensor setup. Select **APPLY** and press **ENTER** to save your settings.



APPENDIX I: CONNECTING AUDIO DEVICES

You can connect one audio capable camera or one self-powered microphone to the system. Use the Line Out port to connect the system to amplified speakers*.



To connect audio devices:

1. Connect the audio cable (RCA) from an audio capable camera to the **AUDIO IN** port on the rear panel of the system.
2. Connect a line out/audio cable from amplified speakers (or other audio device) to the **AUDIO OUT** port.
3. Open the MAIN MENU and select **SYSTEM SETUP**. If necessary, login with your user name and password (by default, user name: ADMIN; password: 1234).
4. Click **SOUND**.
5. Configure **Live Audio** and select **ON**.
6. Beside NETWORK AUDIO TX and NETWORK AUDIO RX, select **ON**.
7. Click **APPLY** to save your settings.
8. Open the **RECORD SETUP** menu and select **ADVANCED RECORDING**.
9. Enable audio recording for each corresponding channel.
10. Click **APPLY** to save your settings.

*Audio capable cameras, self-powered microphones, and amplified speakers are not included with the system.

TROUBLESHOOTING

When a malfunction occurs, it may not be serious and can be corrected easily. The following describes the most common problems and solutions. Please refer to the following before calling Lorex Technical Support:

Error	Possible Causes	Solutions
• DVR is not receiving power, or is not powering up	• Power cable is loose or is unplugged	• Confirm that all cables are connected correctly • Confirm that the power cable is securely connected to the back of the unit

	• Cables are connected, but DVR unit is not receiving sufficient power	• Confirm that the unit is powered on (LED indicators on the front should be ON)
		• If the unit is connected through a power bar or surge protector, try bypassing the bar and connecting the power directly to the wall outlet
		• Confirm that there is power at the outlet:
		  • Connecting the power cable to another outlet
		  • Test the outlet with another plugged device (such as an electric calculator or phone charger)

• Remote control is not detected by the system	• Batteries in the remote control are drained	• Install a new battery in the remote control
	• There are no batteries in the remote control	
• Hard drive is not detected by the system	• Hard drive cables are loose or not properly connected • Hard drive has not been initialized (formatted) by the system	• Remove the housing and check that hard drive cables are firmly connected • From the Main Menu, select System Setup>Disk Manage>Format and then click Start. **ATTENTION**: Formatting erases all video data on the hard drive
	• There is no hard drive in the system	• Open the housing and install a 3.5" SATA hard drive
Hard drive is full (0%) and the unit is no longer recording	• Overwrite is not enabled	• From the Main Menu, select System Setup>Disk Manage>Overwrite and select ON. This enables the system to continuously record by overwriting data once the hard drive is full

Troubleshooting (cont'd.)

Error	Possible Causes	Solutions
Mouse not detected by system	• Mouse cable is not firmly connected to the system	• Firmly connect the mouse cable to the USB port on the front panel
	• Mouse is not connected to the system	
	• System needs to be reset	• Turn the system OFF (press Power button on the front panel). Firmly connect a mouse to any of the USB ports on the system; press the Power button again to turn the system ON
• There is no picture on selected channels / camera picture is not being displayed	• Camera cables are loose or have become disconnected	• Check the camera video cable and connections • Disconnect and reconnect the cable at the DVR and at the Camera • Try moving the camera to another channel or use another cable
• The image on the DVR appears, but does not have sound	• Audio cables are loose or have been disconnected	• Check the AUDIO connections to the DVR
	• Live Audio is disabled	• From the Main Menu, select System Setup>Sound>Live Audio and select ON
	• Audio is associated with the wrong video channel	• The default audio channel is channel 1—connect the audio capable camera to channel 1 or select the correct default audio channel (CH1~4) from the Sound menu
• I can't log in to the Web Client	• You have the wrong port number	• Enter the system's Web Serverport—by default, 80 & 554 • If you have customized the Web Server Port, you may need to port forward the new port number on your router
	• You have the wrong user name and password	• Log in as the administrator (by default, user name: **ADMIN**; password: **1234**) • The system Admin may have disabled Remote Agent access for the Manager or User profiles; have the Admin grant you access to Remote Agent
• My system does not seem to be recording	• Recording mode may be set to "None"	• From the Main Menu select Record Setup>Continuous Motion Recording>**Activation**
	• Motion Recording may be enabled	• During Motion Recording, the system ONLY records when motion is detected by one of the cameras; enable Continuous Recording, or Continuous + Motion Recording

Revision 3.0

LOREX PRODUCT LIMITED WARRANTY

Lorex warrants, to the original retail purchaser only (the "Purchaser"), that this item (the "Product") if properly used and installed, and where applicable, the CD-ROM on which the accompanying software is provided, is free from manufacturing defects in material and workmanship, provided the Product is used in normal conditions and is installed and used in strict accordance with the instructions contained.
This warranty shall be for the following warranty periods (the "Warranty Period"), commencing on the date the Purchaser buys the Product at retail in an unused condition.

Parts and Labor: *1 year (Warranted parts do not include Bulbs, LED's and Batteries)*

Lorex's obligations under this warranty shall be limited to
• The repair and or replacement of the product by means of hardware and/or software (at option of Lorex);
• The replacement of any warranted parts found by Lorex to be defective in the Product or, in Lorex's sole discretion, the replacement of the Product found be Lorex to be defective.
• If Lorex is unable to repair or replace the Product or CD-ROM, refund the then-current value of the Product.
Any replacement parts furnished by Lorex in connection with this warranty shall be warranted to the Purchaser for a period equal to the un expired portion of Warranty Period for the Product.

Warranty Exclusions
This warranty does not apply to Bulbs, LED's and Batteries supplied with or forming part of the product.
This warranty is invalidated if other than Lorex accessories are or have been used in or in connection with the Product or in any modification or repair is made to the Product by other than a service depot authorized by Lorex.

This warranty does not apply to defects or damages arising by use of the Product in other than normal (including normal atmospheric, moisture and humidity) conditions or by installation or use of the Product other than in strict accordance with the instructions contained in the Product's Owner's Manual.
This warranty does not apply to defects in or damages to the Product caused by (i) negligent use of the Product, (ii) misuse, abuse, neglect, alteration, repair or improper installation of the Product, (iii) electrical short circuits or transients, (iv) Purchaser usage not in accordance with product installation, (v) use of replacement parts not supplied by Lorex (vi) improper Product maintenance, or (viii) accident, fire, flood or other Acts of God.

This warranty does not cover the performance or functionality of any computer software included in the package with the Product. This warranty only covers defects in the CD-ROM media such as a broken or a defect in the CD-ROM that would prevent the CD-ROM from being read by your personal computer's CD-ROM drive. Lorex makes no warranty that the software provided with the Product will function without interruption or otherwise be free of anomalies, errors or 'Bugs'. Lorex makes no warranty with regard to any software provided with the Product unless specifically set forth otherwise in a license agreement accompanying such software. This warranty does not cover any costs relating to removal or replacement of any Product, CD-ROM, or software installed on your computer.

Lorex reserves the right to make changes in design or to make additions to or improvements in its products without incurring any obligation to modify any product which has already been manufactured. Lorex will make every effort to provide updates and fixes to its software via its website. This warranty does not cover any alteration or damage to any other software that may be or may become resident on the users system as a result of installing the software provided. This warranty is in lieu of other warranties, express or implied, and Lorex neither assumes nor authorizes any person to assume for it any other obligation or liability in correction with the sale or service of the Product. In no event shall Lorex be liable for any special or consequential damages arising from the use of the Product or arising from the malfunctioning or non-functioning of the Product, or for any delay in the performance of this warranty due to any cause beyond its control.

This warranty shall not apply to the appearance or accessory items including, but not limited to cabinets, cabinet parts, knobs etc., and the uncrating, setup, installation or the removal and reinstallation of products after repair.

Lorex does not make any claims or warranties of any kind whatsoever regarding the Product's potential, ability or effectiveness to prevent minimize, or in any way affect personal or property damage or injury. Lorex is not responsible for any personal damage, loss or theft related to the Product or to its use for any harm, whether physical or mental related thereto. Any and all claims or statements, whether written or verbal, by salespeople, retailers, dealers or distributors to the contrary are not authorized by Lorex, and do not affect this provision of this warranty.

Lorex's responsibility under this, or any other warranty, implied or expressed, is limited to repair, replacement or refund, as set forth above. These remedies are the sole and exclusive remedies for any breach of warranty. Lorex is not responsible for direct, special, incidental, or consequential damages resulting from any breach of warranty or under any other legal theory including but not limited to, loss profits, downtime, goodwill, damage to or replacement of equipment and property and any costs of recovering, reprogramming or reproducing any program or data stored in or used with a system containing the Product CD-ROM or accompanying software.

Lorex does not warrant that the software will operate with any other software except that which is indicated. Lorex cannot be responsible for characteristics of third party hardware or software which may effect the operation of the software included.

The purchaser may have other rights under state, provincial, or federal laws and where the whole or part of any item of this warranty is prohibited by such laws, it shall be deemed null and void, but the remainder of the warranty shall remain in effect.
All expressed and implied warranties are limited in duration to the limited warranty period. No warranties apply after that period. Some states do not allow limitation on how long an implied warranty lasts, so this limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above warranty may not apply to you. This limited warranty gives you specific legal rights and you may also have other rights that vary from state to state.

Obtaining Service

In order to obtain service, please make sure that you have registered your product on-line (www.lorexcctv.com) in the warranty registration section. Should the Product require service under this warranty, the Purchaser must provide Lorex with a copy of his/ her original, dated bill of sale; receipt or invoice, failing which Lorex will not perform any of its obligations under this warranty. If you return the Product and/or CD-ROM to Lorex, you must assume the risk of damage or loss during shipment. You must use the original packaging or the equivalent, and you must pay postage.
To claim on this warranty, proceed with the following steps.

1 Pack the Product in a well-padded sturdy carton.
2. i). If the unit was purchased in the United States proceed as follows:
a. Please contact our customer service department to obtain a return authorization number.
b. Return the unit to: Lorex Returns
c/o Russell Farrow
15 Lawrence Bell Drive, Amherst, NY 14221

ii). If the unit was purchased in Canada proceed as follows:
a. Please contact our customer service department to obtain a return authorization number.
b. Return the unit to: Lorex Service Center.
250 Royal Crest Court, Markham, Ont. L3R 3S1

iii) If the unit was purchased in Europe please visit:

www.lorexinternational.com for return instructions.

TOLL FREE CUSTOMER SUPPORT
North America: 1-888-42-LOREX (1-888-425-6739)
Local: 905-940-5355
International: 800-42-LOREX 0 (800-425-67390)
www.lorexcctv.com

Always use discretion when installing video and/or audio surveillance equipment especially when there is perceived privacy. Inquire regarding federal, state and/or local regulations applicable to the lawful installation of video and or audio recording or surveillance. Party consent may be required.

GARANTIE LIMITÉE DES PRODUITS LOREX

Lorex garantit à l'acheteur original (ci-après désigné comme étant "l'acheteur") dans un magasin au détail seulement, et que ce produit (ci-après désigné comme étant le "produit"), s'il est installé correctement et - s'il y a lieu - utilisé conformément aux instructions ci-incluses, et le disque CD-ROM qui comporte le logiciel, seront libres de tout défaut de fabrication, tant dans les pièces que la main-d'oeuvre, pourvu que le produit soit utilisé dans des conditions normales et installé et utilisé strictement selon les instructions incluses dans le guide qui l'accompagne.
Cette garantie couvrira la période mentionnée ci-dessous (ci-après désignée comme étant la "période de garantie"), commençant le jour où l'acheteur se procure le produit à l'état neuf dans un magasin au détail.
Pièces et main-d'oeuvre : *1 année (les pièces couvertes n'incluent pas les ampoules, voyants à DEL ni les piles).*
Les obligations de Lorex selon les termes de cette garantie se limitent exclusivement aux points suivants :
- Lorex se réserve le droit de réparer ou de remplacer, sa seule discrétion, le logiciel et/ou le matériel.
- Le remplacement des pièces sous garantie que Lorex estime être défectueuses dans le produit ou le disque CD-ROM ou, à sa seule discrétion, le remplacement du produit jugé défectueux.
- Si Lorex ne peut réparer ni remplacer le produit ou le disque CD-ROM, rembourser la valeur monétaire du produit ou du disque CD-ROM en cours au moment de l'achat.

Toutes les pièces remplacées par Lorex seront couvertes pendant la période résiduelle de la garantie dudit produit.

Exclusions de la garantie
Pour obtenir du service, veuillez vous assurer que vous avez inscrit votre produit en ligne (www.lorexcctv.com) dans la section d'abonnement à la garantie. Cette garantie ne couvre pas les ampoules, voyants à DEL ni les piles incluses avec le produit ou faisant partie de celui-ci.
Cette garantie deviendra nulle si des accessoires autres que ceux vendus ou distribués par Lorex sont utilisés ou ont été utilisés conjointement avec le produit ou si des modifications ou des réparations ont été effectuées au produit par une entité autre qu'un centre de service autorisé par Lorex.

Cette garantie ne s'applique pas aux défauts ni aux dommages survenus suite à une utilisation anormale du produit (incluant des conditions atmosphériques et des taux d'humidité anormaux) ou suite à une installation ou une utilisation du produit autre que celle décrite dans le guide accompagnant le produit.

Cette garantie ne s'applique pas aux défauts ni aux dommages causés au produit suite à (i) une utilisation insouciante du produit, (ii) mauvaise utilisation, abus, négligence, modification ou mauvaise installation du produit, (iii) court-circuits ou transitoires électriques, (iv) tout usage de l'acheteur qui ne correspond pas à l'installation prescrite du produit, (v) l'utilisation de pièces non fournies par Lorex, (vi) un entretien inadéquat du produit, ou (vii) tout accident, incendie, inondation ou autres désastres naturels.

Cette garantie ne couvre pas la performance ni la fonctionnalité de tout logiciel informatique inclus avec le produit. Cette garantie ne couvre pas les défauts que pourrait contenir le support optique (disque CD-ROM) ou magnétique (disquette), tel qu'un CD-ROM brisé ou comportant un défaut qui l'empêcherait d'être lu adéquatement par le lecteur de disque de votre ordinateur. Lorex ne garantit pas que le logiciel fourni avec le produit fonctionnera sans interruption ni qu'il sera libre de tout défaut, d'erreurs ou de 'bogues'. Lorex ne garantit pas le logiciel inclus à moins que cela ne le soit mentionné spécifiquement dans l'entente de la licence incluse avec le produit. Cette garantie ne couvre pas les frais se rapportant à l'enlèvement ni à la réinsertion de tout produit, logiciel, périphérique ou disque CD-ROM installé sur votre ordinateur.

Lorex se réserve le droit de modifier la conception ou d'apporter des ajouts ou des améliorations à ses produits, sans obligation de sa part de modifier les produits déjà fabriqués. Lorex fera tout en son pouvoir pour fournir des améliorations et des réparations à son logiciel via son site web.
Cette garantie ne couvre pas les altérations ni les dommages effectues tout autre logiciel, ni les bogues pouvant résider de fa□on permanente sur le système de l'utilisateur suite l'installation du logiciel ci-inclus.

Cette garantie a préséance sur toutes les autres garanties tacites ou explicites, incluant la garantie en qualité loyale et marchande et les aptitudes visant toute autre obligation ou responsabilité de la part de Lorex, et par les présentes, Lorex n'autorise aucune personne ni entité à assumer pour elle nulle autre responsabilité en rapport avec la vente de ce produit. Lorex ne sera pas tenue responsable, en aucune circonstance, des dommages-intérêts directs ou indirects survenant de l'utilisation du produit ou suite au mauvais fonctionnement ou à l'absence de fonctionnement dudit produit, ainsi que pour tout délai dans l'exécution de cette garantie suite à des circonstances hors du contrôle de Lorex.

Lorex ne garantit d'aucune manière l'apparence extérieure du produit, ni les pièces ou accessoires incluant, mais ne s'y limitant pas, le boîtier, les pièces du boîtier, les boutons, etc., ainsi que le déballage, l'installation, l'enlèvement et la réinstallation du produit après une réparation.

Lorex ne garantit pas et ne fait aucune revendication en ce qui a trait au potentiel, à la capacité ou l'efficacité de prévenir, réduire ou d'une façon quelconque, d'influer sur les dommages à la propriété privée ou sur les blessures corporelles. Lorex ne sera pas tenue responsable des blessures corporelles, dommages à la propriété personnelle, perte ni au vol se rapportant de près ou de loin au produit ou son usage dans un cadre malveillant, qu'il soit physique ou mental. Lorex n'autorise aucunement les représentants, détaillants ou grossistes, à faire des revendications ou des énoncés de la part de Lorex, tant par voie écrite que verbale et ces énoncés n'influent d'aucune manière sur les clauses de cette garantie.

La seule responsabilité de Lorex, selon les termes de cette garantie, qu'ils soient tacites ou explicites, se limite à une réparation, un remplacement ou un remboursement, selon les clauses décrites dans les présentes. Ces recours constituent les seuls auxquels a droit l'acheteur pour les bris des clauses de la garantie. Lorex ne sera pas responsable des dommages-intérêts spéciaux, directs ou indirects, qui résulteraient d'un bris des clauses de cette garantie ou de toute autre convention législative, incluant mais ne s'y limitant pas, les pertes de profits, pannes de courant immobilisant des équipements, la valeur ajoutée des biens incorporels, les dommages effectués au produit et à la propriété ou les coûts reliés à leur remplacement, ainsi que les frais de recouvrement, reprogrammation ou reproduction d'un programme ou des données stockées dans un système contenant le disque CD-ROM du produit ou le logiciel qui accompagne celui-ci.
L'acheteur peut bénéficier de certains droits provinciaux ou fédéraux additionnels et toute clause de cette garantie qui soit prohibée par de telles lois sera jugée nulle et sans effet mais les autres clauses demeureront en vigueur.

Lorex ne garantit pas que ce logiciel fonctionnera conjointement avec tout autre logiciel ou suite logicielle, ˆ moins que cela ne soit indique. Lorex ne sera pas tenue responsable des caractéristiques ni des fonctions du matériel ou des logiciels d'un tiers pouvant entrer en conflit avec le fonctionnement du logiciel ci-inclus.

Toutes les garanties tacites ou explicites se limitent à la durée de la garantie limitée. Aucune garantie ne sera applicable après cette période de temps. Certains états ou provinces ne permettent pas de restrictions en ce qui a trait aux termes d'une garantie tacite, ni d'exclusions aux dommages-intérêts directs ou indirects et il se peut que ces restrictions ne s'appliquent pas à vous. Cette garantie donne à l'acheteur original des droits spécifiques et il se peut que d'autres droits, variant d'un état ou d'une province à l'autre, puissent lui être conférés.

Obtention du service
Si l'acheteur a besoin de service pour son produit, selon les termes de cette garantie limitée, il doit fournir à Lorex une copie de la facture d'achat affichant clairement la date et l'endroit où le produit a été acheté. Sans cette preuve d'achat, Lorex ne sera pas dans l'obligation de remplir ses obligations envers l'acheteur. Si vous retournez le produit et/ou le disque CD-ROM à Lorex, vous devez assumer le risque que ceux-ci soient endommagés ou perdus au cours de l'expédition. Vous devez emballer le produit dans sa boîte originale ou un emballage adéquat et vous devez défrayer les coûts d'expédition à l'une des adresses mentionnées ci-dessous.
Pour bénéficier du service sous garantie, vous devez suivre les étapes ci-dessous :

1. Emballez le produit dans une boîte solide et remplie de matériau d'expédition.
2. i) Si l'appareil a été acheté aux États-Unis, suivez ces étapes-ci :
   a. Veuillez contacter notre département de service à la clientèle pour obtenir un numéro d'autorisation pour le retour.
   b. Retournez le produit à : Lorex Returns
      c/o Russell Farrow
      15 Lawrence Bell Drive, Amherst, NY 14221

   ii) Si l'appareil a été acheté au Canada, suivez ces étapes-ci :
   a. Veuillez contacter notre département de service à la clientèle pour obtenir un numéro d'autorisation pour le retour.
   b. Retournez le produit à : Lorex Customer Service
      250 Royal Crest Court, Markham, ON L3R 3S1

   iii) Si l'unité a été achetée dans Europe veuillez visiter : www.lorexinternational.com pour les instructions de retour

COMPOSEZ LA LIGNE D'ASSISTANCE SANS FRAIS AUS CONOMMATEURS:
L'Amérique du nord: 1-888-42-LOREX (1-888-425-6739)
Local : 905-940-5355
International : 800-42-LOREX 0 (800-425-67390)

Soyez toujours très discret lorsque vous installez des systèmes de surveillance, surtout dans les endroits plus retirés. Informez-vous au sujet des lois et règlements municipaux, provinciaux ou fédéraux qui s'appliquent à l'installation d'appareils de surveillance audio et vidéo. Il se peut que le consentement de la partie surveillée soit exigé.

GARANTÍA LIMITADA DEL PRODUCTO LOREX

Lorex garantiza, sólo al comprador original al por menor (el "Comprador") que este artículo (el "Producto"), si se usa e instala debidamente, y – si hay lugar - el CD-ROM en el que se proporciona el software asociado, está libre de defectos de fabricación en materiales y mano de obra, sujeto a que el Producto sea usado en condiciones normales y que sea instalado y usado estrictamente de acuerdo con las instrucciones contenidas.
Esta garantía será para los siguientes períodos de garantía (el "Período de Garantía"), a partir de la fecha en que el Comprador adquiera el Producto al por menor en la condición de no haber sido usado previamente.
Repuestos y Mano de Obra: 1 año (Las piezas garantizadas no incluyen bombillas, LEDs y baterías)
Las obligaciones de Lorex bajo esta garantía estarán limitadas a:

- la reparación o el reemplazo del producto por medio de hardware y/o software (a opción de Lorex).
- el reemplazo de cualquier parte garantizada que Lorex determine que está defectuosa en el Producto o CD-ROM o, por decisión única de Lorex, al reemplazo del Producto que Lorex encuentre defectuoso.
- Si a Lorex no le es posible reparar o reemplazar el Producto o el CD-ROM, se devolverá el valor vigente en ese momento del Producto o CD-ROM.

Se garantizará al Comprador cualquier pieza de repuesto provista por Lorex en conexión con esta garantía por un período igual a la parte no vencida del Período de Garantía del Producto.

Exclusiones de la garantía
Esta garantía no se aplica a las bombillas, LEDs y baterías suministradas con el producto o que formen parte del mismo.
Esta garantía quedará nula si se han usado accesorios que no son Lorex en el Producto o en relación con el mismo o si se hace alguna modificación o reparación al Producto en algún taller que no sea un local de servicio autorizado por Lorex.

Esta garantía no se aplica a defectos o daños resultantes del uso del producto en condiciones diferentes a las normales (incluyendo condiciones atmosféricas o de humedad normales) o por la instalación o uso del Producto en forma distinta a seguir estrictamente las instrucciones contenidas en el Manual del Propietario del Producto.

Exclusiones de la garantía
Esta garantía no se aplica a las bombillas, LEDs y baterías suministradas con el producto o que formen parte del mismo.
Esta garantía quedará nula si se han usado accesorios que no son Lorex en el Producto o en relación con el mismo o si se hace alguna modificación o reparación al Producto en algún taller que no sea un local de servicio autorizado por Lorex.

Esta garantía no se aplica a defectos o daños resultantes del uso del producto en condiciones diferentes a las normales (incluyendo condiciones atmosféricas o de humedad normales) o por la instalación o uso del Producto en forma distinta a seguir estrictamente las instrucciones contenidas en el Manual del Propietario del Producto.

Esta garantía no se aplica a defectos o daños al Producto causados por (i) uso negligente del Producto, (ii) mal uso, abuso, negligencia, alteración, reparación o instalación incorrecta del Producto, (iii) cortocircuitos o corrientes eléctricas transitorias, (iv) uso por el Comprador que no está de acuerdo con la instalación del producto, (v) uso de piezas de repuesto no suplidas por Lorex (vi) inadecuado mantenimiento del Producto, o (vii) accidente, incendio, inundación u otros accidentes naturales.

Esta garantía no cubre el rendimiento o funcionalidad de ningún software de computadora incluido en el paquete con el Producto. Esta garantía sólo cubre defectos en el material de CD-ROM, tal como roturas o defectos en el CD-ROM que impida que sea leído por la unidad de CD-ROM de su computadora personal. Lorex no garantiza que el software provisto con el Producto funcione sin interrupción o que de otra forma esté libre de anomalías, errores o "bugs". Lorex no ofrece ninguna garantiza con respecto a algún software provisto con el equipo a menos que específicamente se establezca de otra forma en un acuerdo de licencia que acompañe a dicho software.
Esta garantía no cubre ningún costo relativo a la remoción o reemplazo de algún Producto, CD-ROM, o software instalado en su computadora.
Lorex se reserva el derecho de hacer cambios en el diseño o hacer adiciones o mejoras a sus productos sin incurrir en ninguna obligación de modificar algún producto que ya haya sido fabricado.
Lorex tratará en lo posible de proporcionar actualizaciones y arreglos a su software por medio de su página en la red.
Esta garantía no cubre ninguna alteración ni daño a algún otro software que pueda ser instalado o pueda quedar instalado en el sistema del usuario como resultado de la instalación del software provisto.
Esta garantía es el reemplazo de otras garantías, expresas o implícitas, y Lorex no asume ni autoriza a ninguna persona a asumir por ella ninguna obligación en relación con la venta o servicio del producto. En ningún caso Lorex será responsable por ningún daño o perjuicio especial o consecuente resultante del uso del Producto o de su mal funcionamiento o incapacidad de funcionar, o por cualquier demora en la atención de esta garantía debida a causas fuera de su control.

Esta garantía no se aplicará a la apariencia o artículos accesorios incluyendo, sin estar limitado a ellos, gabinetes, piezas de gabinetes, perillas, etc., y el desembalaje, instalación, configuración, o remoción y reinstalación del producto después de ser reparado.

Lorex no hace ninguna de cada declaración ni garantía de ninguna clase con respecto al potencial, capacidad o eficacia del Producto para evitar, minimizar o en alguna forma afectar a los daños o lesiones personales o a la propiedad. Lorex no es responsable por ningún daño personal, siniestro o robo relacionado con el Producto o a su uso para cualquier daño, sea físico o mental relacionado con el mismo. Cualquier afirmación o declaración, sea escrita o verbal, hecha por vendedores, minoristas o distribuidores en sentido contrario no es autorizada por Lorex y no afecta esta disposición de esta garantía.
La responsabilidad de Lorex según ésta o cualquier otra garantía, implícita o explícita, está limitada a la reparación, reemplazo o reembolso, como se establece anteriormente. Estas compensaciones son el único y exclusivo remedio por cualquier incumplimiento de garantía. Lorex no es responsable por daños y perjuicios directos, especiales, incidentes, o consecuentes resultantes de algún incumplimiento de garantía o bajo cualquier otra teoría legal, incluyendo pero sin estar limitada a: pérdida de utilidades, paralización, plusvalía, daños o reemplazo de equipos y propiedad y cualquier costo de recuperar, reprogramar o reproducir cualquier programa o datos almacenados o usados con un sistema que contenga el CD-ROM del Producto o el software que lo acompaña.

Lorex no garantiza que el software operará con ningún otro software excepto con el que se indica. Lorex no puede ser responsable de las características de hardware o software de terceras personas que puedan afectar la operación del software incluido.

El comprador puede tener otros derechos de acuerdo con las leyes federales, provinciales o estatales y cuando toda esta garantía o parte de la misma sea prohibida por dichas leyes, será considerada nula, pero el resto de la garantía permanecerá vigente.
Todas las garantías expresadas e implícitas están limitadas en duración al período de garantía limitada. Ninguna garantía se aplicará después de dicho período. Algunos estados no permiten limitación a la duración de una garantía implícita, de modo que esta limitación puede no serle de aplicación. Algunos estados no permiten la exclusión o limitación de daños y perjuicios incidentes o consecuentes, por lo que la garantía anterior puede no serle de aplicación. Esta garantía limitada le otorga derechos legales específicos y usted puede también tener otros derechos que varía de un estado a otro.
Cómo obtener servicio

Con el fin de obtener servicio, por favor asegúrese de registrar haber registrado su producto en nuestra pagina web www.lorexcctv.com en la sección de registro de garantía. Si el Producto necesitase servicio bajo esta garantía, el Comprador debe hacer llegar a Lorex una copia del recibo o factura de compra, con su fecha respectiva, sin lo cual Lorex no estará obligada a cumplir con ninguna de sus obligaciones bajo esta garantía. Si devuelve el Producto y/o el CD-ROM a Lorex, debe usted asumir el riesgo de daño o pérdida durante el envío. Debe usar el envase original o equivalente y debe pagar el flete.
Para hacer un reclamo bajo esta garantía, proceda con los siguientes pasos.

1. Empaque el Producto en una caja robusta bien acolchada.
2. i). Si la unidad fue comprada en Estados Unidos proceda en la siguiente forma:
   a. Para devoluciones por favor contacte nuestro departamento de servicio para obtener un número de autorización
   b. Devuelva la unidad a: Lorex Returns
      c/o Russell Farrow
      15 Lawrence Bell Drive, Amherst, NY 14221

   ii). Si la unidad fue comprada en Canadá proceda en la siguiente forma:
   a. Para devoluciones por favor contacte nuestro departamento de servicio para obtener un número de autorización.
   b. Devuelva la unidad a: Lorex Customer Service.
      250 Royal Crest Court, Markham, Ont. L3R 3S1

   iii) Si la unidad fue adquirida en Europa y desea devolver el producto por favor visite: www.lorexinternational.com para obtener instrucciones.

NUMERO GRATUITO DE SERVICIO A CLIENTES:
Norteamérica: 1-888-42-LOREX (1-888-425-6739)
Internacional: 800-42-LOREX 0 (800-425-67390)
Local : 905-940-5355

www.lorexcctv.com

Use siempre discreción cuando instale equipo de vigilancia por video y/o audio especialmente cuando se percibe privacidad. Consulte acerca de las regulaciones federales, estatales y /o locales aplicables a la instalación legal de equipos de grabación o vigilancia por video y/o audio. Puede requerirse el consentimiento de las partes.

CONNECT . PROTECT

Enhance your security with genuine Lorex Cameras, Digital Video Recorders, Integrated Systems and Accessories. Order whatever you need at www.lorextechnology.com or call 1-888-42-LOREX (1-888-425-6739)

Warehouse

CVC6998HR

Office

LNZ4001

Restaurant

VQ1536HR

Convenience Store

LW2100

Day Care

LW2702

PROTECT EVERYTHING THAT MATTERS

Add wired or wireless cameras to expand the "Envelope of Protection" for your business, your home and your family

Home Office

LW2002B

Drive Way

SG7540

Front Door

LW2301

Nursery

LW2002W

Backyard

LW2201

LOREX®